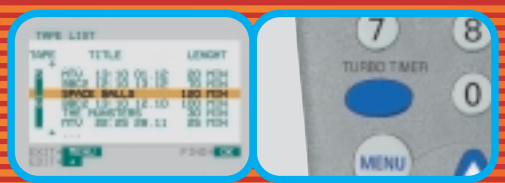
6 head HiFi VCR

VR 620

TapeList

- *Turbo Drive with Tape Position Indicator*
- *Digital Studio Picture Control*
- *Turbo Timer with Net Name Detection*
- *Record Link*
- *Follow TV*
- *Audio Stereo Cinch Outputs*
- *Front A/V*

Silver Shadow



Let's make things better.

PHILIPS

6 head HiFi VCR

VR 620

Product information

Reception - Installation
- Tuner: *Hyperband, UHF, VHF*
- Tuning - presets: *PLL, CH entry, 99 presets*
- TV Related Functions: *16:9 (pin 8), Analogue Direct Record, Analogue Follow TV*
- Time/Date Download: *PDC (Time/Date), Text (Time)*

User Interface
- Record Speed: *Long Play, Standard Play*
- Record Speed Selection: *Auto LP, Per Menu*
- Picture Improvement System: *Digital Studio Picture Control*
- Audio Recording Level: *Automatic*
- Archiving System: *Tape List*
- Special Features: *Auto Standby On/Off, Child Lock, Display On/Off*

On Tape Standard
- Additional Playback Standard: *BLACK & WHITE, NTSC Playback on PAL TV*

Remote Control Unit
- Remote Control - Type Number: *RT123/111*
- Remote Control - Codes: *VCR1, VCR2, TV-Multicode*

Connectors Rear
- EXT1: *Black, Euro CVBS in/out*
- EXT2: *Black, Euro Decoder, RGB loop through*
- Rear Audio Connector: *Cinch Stereo Out*
- Terrestrial Antenna In/Out: *75 Ohms (IEC type)*
- Mains Connector: *Standard (IEC type)*

Connectors Front
- Front A/V Connectors: *Cinch CVBS In, Cinch Stereo In*

Tape Deck
- Number of Video / FM Audio / Flying Erase Heads: *4 / 2 / 0*
- Play: *+1, -1, Repeat*
- Additional Playback Feature: *Perfect Still, Multiple Search Speed, Multiple slow Motion Speed*
- Index Related Functions: *Blank Tape Search, Next/Prev. index search*
- Head Cleaning Mode: *Automatic*
- Tape Length Recognition: *Automatic*
- Tape Counter: *Linear Relative (h.m.s), Time left (h.m.), Tape Position Indicator*
- Winding / Rewinding Time (E180): *100 sec.*
- Automatic Functions at Tape End: *Rewind after Play, Eject after Record*

Programming
- Number of Events: *6/month*
- Record Control & Transmitter Identification: *Net-name detection, PDC, VPS*
- Special Timer Programming: *Turbo Timer*
- Record Link: *SCART 2*

General
- Voltage: *198-264 V*
- Frequency: *50Hz*
- Backup Presets: *1yr*
- Backup Clock - Calendar - Timer Event: *3hrs*
- Power Consumption Play / Std-By / Low Power Std-By in W: *16 / 4.4 / <4*
- Set Size - W x D x H in mm: *380 x 260 x 93*
- Packaging - W x D x H in mm: *450 x 382 x 180*
- Weight Including / Excluding package in kg: *5.5 / 3.6*
- Equipment Supplied: *Antenna, Mains cord, Batteries*

Product Highlights

• Tape List
Philips' Tape List offers a convenient and easy to use tape content information system for your most frequently used tapes (up to 9). You can use any tape, even those with existing recordings. To browse through the content of your most frequently used tapes, simply press the Tape List button on the remote control. The complete tape content overview will be shown on the TV screen. And you have immediate access to any recording just by selecting the desired recording (from the information displayed on your TV screen). On top of that you can edit the titles whenever you want to.

• Digital Studio Picture Control
Digital Studio Picture Control keeps checking the quality of your videotapes and reproduces the best possible picture performance. Philips' Digital Studio Picture Control optimises the playback quality. It measures the characteristics of the tape, adapts the resolution and reduces the picture noise.

• Turbo Timer with Net Name Detection
Is Timer Programming complicated? No! Is Timer Programming time consuming? No! Just press the Turbo Timer button on the remote control, select the TV channel you want to record (directly by its name), set the start and the end time. That's it. All it takes is only a few seconds.

• Record Link
Your satellite receiver is equipped with a Timer function? Connect both your VCR and the satellite receiver with a SCART cable and make use of the „Record Link" function. You just have to activate it and switch your VCR to std-by. As soon as the satellite receiver gets active, the VCR switches on and is set in the record mode. At the end of the recording it returns automatically to Stand-by.

• Multibrand TV Remote Control
Should we say it? Our remote-controls can communicate with more than 190 different brands of TVs.

	VR620/39	VR620/16	VR620/07	VR620/02
Tuning/Install Features	Auto Tuning, Manual Store, Plug & Play, Welcome Screen	Auto Tuning, Manual Store, Plug & Play, Welcome Screen	Auto Install, Manual Store, Plug & Play, Welcome Screen	Auto Tuning, Manual Store, Plug & Play, Welcome Screen
TV Systems Off Air	PAL B/G PAL I SECAM B/G SECAM L/L'	PAL B/G	PAL I	PAL B/G
Sound Systems	German Stereo, Mono, NICAM	German Stereo, Mono, NICAM	German Stereo, Mono, NICAM	German Stereo, Mono
Modulator	Splitter	Pal G	Pal I	Pal G
Modulator Features	–	Electr. On/Off switch, Manual Frequency Adjustment	Auto Seek, Electr. On/Off switch, Manual Frequency Adjustment	Electr. On/Off switch, Manual Frequency Adjustment
Frequency Adj. Range	–	Ch 21 - Ch 55	Ch 21 - Ch 55	Ch 21 - Ch 55
Preadj. modulation frequency	–	591.25 MHz (Ch 36)	583.25 MHz (Ch 35)	591.25 MHz (Ch 36)
OSD Menu Languages	Czech, Danish, Dutch, English, Finnish, French, German, Hungarian, Italian, Norwegian, Polish, Portuguese, Russian Cyrillic, Slovak, Spanish, Swedish	Czech, Danish, Dutch, English, Finnish, French, German, Hungarian, Italian, Norwegian, Polish, Portuguese, Russian Cyrillic, Slovak, Spanish, Swedish	English	Czech, Danish, Dutch, English, Finnish, French, German, Hungarian, Italian, Norwegian, Polish, Portuguese, Russian Cyrillic, Slovak, Spanish, Swedish
Record / Playback Standard	MESECAM, PAL, SECAM	PAL	PAL	PAL
Programming System	Showview ShowView Mapping, Daily/Weekly, Programming by Net-Name	Showview Showview Mapping, Daily/Weekly, Programming by Net-Name	Video Plus +, ShowView Mapping, Daily/Weekly, Programming by Net-Name	Showview ShowView mapping, Daily/Weekly, Programming by Net-Name

Subject to modification without notice

Show View and Video+ are registered Trademarks of Gemstar Development Cooperation.

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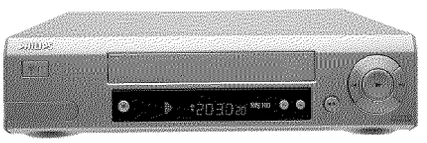
The remote control

TAPE LIST	**Tape List**: To call up the Tape List
STANDBY/ON ⏻	**Switch on or off**: To switch set on or off, interrupt menu function, interrupt a programmed recording (TIMER)
CLEAR (CL)	**Delete**: To delete last entry/Clear programmed recording (TIMER)
SELECT	**Select**: To select a function
CHILD LOCK	**Child lock**: To switch child lock on/off
MONITOR	**TV monitor**: To switch between TV reception and VCR playback
0-9	**Number buttons**: 0 - 9
TURBO TIMER	**TurboTimer**: To programme a recording with the function Turbo Timer
TIMER ⏲	**TIMER**: To make a TIMER programming with VIDEO Plus+ or to alter or clear a programmed TIMER
MENU	**Menu**: To call up or end main menu
OK	**Store/Confirm**: To store or confirm entry
←	**Select**: Cursor left
→	**Select**: Cursor right
↑+ P	**Select**: To select the next line or programme number
P –↓	**Select**: To select the previous line or programme number
PLAY ►	**Playback**: To play a cassette
◁◀	**Rewind**: During STOP and STANDBY: rewind, during PLAYBACK: reverse scanning
STOP ■	**Pause/Stop**: To stop the tape, except during TIMER-recording
▶▷	**Forward wind**: During STOP and STANDBY: forward wind, during PLAYBACK: forward scanning
INDEX ▶I	**Index search**: In combination with ◁◀ / ▶▷ : to search for previous or next recording on the cassette
RECORD/OTR ●	**Record**: To record the TV channel selected at this moment
STILL ▶I◀	**Still picture**: To stop the tape and show a still picture

Additional TV functions

+ ◿	**TV volume**: TV volume up
◿ −	**TV volume**: TV volume down
TV 🔇	**TV sound off**: To switch the sound on or off
TV ⏻	**Standby**: To switch off the TV
+ TV	**TV programme number**: To select next programme number
TV −	**TV programme number** : To select previous programme number

Front of the device



STANDBY/ON ⏻/I	**Switch on or off**: To switch off or on, interrupt a function, interrupt a programmed recording (TIMER)
RECORD ●	**Record**: To record the TV channel selected at this moment
PROGRAMME −	**Select**: One line or programme number down
PROGRAMME +	**Select**: One line or programme number up
STOP/EJECT ■/⏏	**Pause/Stop, eject cassette**: To stop the tape and eject the cassette
◁◀	**Rewind**: During STOP and STANDBY: rewind, during PLAYBACK: reverse scanning
►	**Playback**: To play a cassette
▶▷	**Forward wind**: During STOP and STANDBY: forward wind, during PLAYBACK: forward scanning

Behind the flap at the left-hand corner on the front

White and red socket **L AUDIO R**	**Audio input socket left/right** : To connect a camera recorder or video recorder (programme number '53')
Yellow socket **VIDEO**	**Video input socket**: To connect a camera recorder or video recorder (programme number '53')

The symbols on your video recorder display

These symbols can light up on your video recorder display:

	This is where the current operating mode is shown as a symbol.
LP	When you have switched on the LP (Long Play) function or when you play a tape that has been recorded in LP (Long Play).
	When you have switched on the child lock.
	When a satellite recording has been programmed.
DEC	When a decoder has been allocated to the TV channel (currently selected programme number on the video recorder) you have currently selected on the video recorder.
	When you play a cassette that has been recorded with hifi sound, or when a hifi sound is transmitted.
	When you are making a recording.
	When you have programmed a recording or when a programmed recording is being made.
D	When you are programming daily recordings.
W	When you are programming weekly recordings.
	When you have put a cassette in the video recorder.
DATE	When the date of the programmed recording is shown.
START	When the start time of the programmed recording is shown.
PROG.	When the programme number of the programmed recording is shown.
END	When the end time of the programmed recording is shown.
VPS/PDC	Video Programming System / Programme Delivery Control: when a VPS or PDC code is being transmitted.
	Display of programme number of the TV channel / tape position / channel name / function.
	Tape position in seconds.

1 Introduction

Dear Philips customer,

Instruction manuals are usually very dry since they are technically-oriented and often poorly translated. I have been employed by Philips for this reason.

Allow me to introduce myself.
My name is Phil. I will be guiding you through the instruction manual and try to be of help in operating your new device. At appropriate points along the way, I will be providing you with the following information:

Excuse me?
Here I will be explaining seemingly unimportant things.

Tip
Here I will be giving you instructions on functions that help make it easier to use your device.

Problem
Here I will help you to find the cause of problems and their solutions.

For experts
Here I will be giving you instructions on functions that are necessary for special applications.

I hope you have lots of fun with your new device.

Phil

P.S. If you have questions or if problems come up during operation, please see the helpful information in the chapter 'Before you call an engineer'. If this doesn't help you to resolve the problem, please call the **customer support service** for your country. The corresponding telephone numbers and e-mail addresses can be found on the last page of this instruction manual.

Welcome to the large family of owners of PHILIPS VHS video recorders.

Thank you for buying a VR620/07 .
Please take the time to read this operating manual before using your video recorder. It contains important information and notes regarding operation.
The video recorder should **not be turned on immediately after transportation** from a cold to a hot area or vice versa, or in conditions of extreme humidity.
Wait at least **three hours** after transporting the device. The video recorder needs this time in order to become acclimatised to its new environment (temperature, air humidity, etc.).

Your Philips team hopes that you will enjoy using your new video recorder.

This video recorder is used for the recording and playback of VHS video cassettes.
Cassettes with the VHS-C label (VHS cassettes for camcorders) may only be used with a suitable adapter.

This product complies with the requirements of Directive 73/23/EEC +89/336/EEC +93/68 EEC.

Specifications

Voltage: 220-240V/50Hz
Energy consumption : 16W
Energy consumption (Standby): less than 4W (clock display switched off)
Rewind time: approx. 100 seconds (cassette E-180)

Dimensions in cm (B/H/T): 38.0/9.3/26.0
Number of video heads : 4
Number of video heads (HIFI): 2
Recording/playback time: **4 hours (SP)** (cassette E-240)
8 hours (LP) (cassette E-240)

Supplied accessories

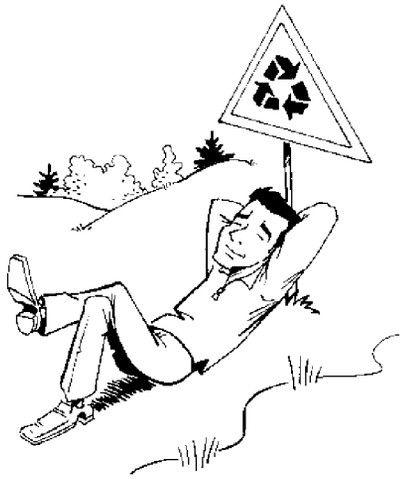
Operating instructions
Remote control and batteries
Antenna cable
Power cable
Quick install guide

Important notes regarding operation

Danger: High voltage!
Do not remove the top cover as there is a risk of an electrical shock!

The video recorder does not contain any components that can be repaired by the customer. Please leave all maintenance work for qualified personnel.

As soon as the video recorder is connected to the power supply, there are some components that are in constant operation. To switch off the video recorder completely you must disconnect it from the power supply.



These operating instructions have been printed on non-polluting paper.

Deposit old batteries at the appropriate collection points.

Please make use of the facilities available in your country for disposing of the packaging of the video recorder in a way that helps to protect the environment.

This electronic device contains many materials that can be recycled. Please enquire about the possibilities for recycling your old device.

Make sure that air can circulate freely through the ventilation slots on the video recorder. Do not place the device on an unsteady base.

Make sure that no objects or liquids enter the video recorder. Do not place vases or the like on the video recorder. If liquid is spilt into it, immediately disconnect the video recorder from the power supply and call After-sales Service for advice.

Do not place any combustible objects on the device (candles, etc.).

Make sure that children do not place any foreign objects within the openings or ventilation slots.

Special functions of your new video recorder

Your PHILIPS video recorder is not just for recording and playing back VHS cassettes. It also has a whole range of special functions which will make the day-to-day use of your new video recorder much easier.

DIGITAL STUDIO PICTURE CONTROL

Philips has developed a system which produces the best possible playback quality. For old and often-used video cassettes, this system reduces interference. For new or high quality cassettes, it emphasises the details.

Plug and Play

When you connect your video recorder to your television and plug it into the wall socket, you will be welcomed with a screen menu. All you have to do is follow the instructions in the 'intelligent help line' for the next step. Enjoy the automatic TV channel search/save function and the automatic time setting.

Multibrand TV control

You can operate the main functions on your television using your video recorder remote control, even if your television is not a Philips.

Follow TV

This function automatically transfers all the television channel settings onto your video recorder.

Record Link

Recordings made on your video recorder can be controlled by an external satellite receiver.

Direct Record

Your video recorder can ascertain which channel is currently playing on your television and record from it at the touch of a button.

TURBO DRIVE

The precision tape drive from Philips provides short rewind times and automatic tape length recognition.

VIDEOPlus+

Simple programming system for video recorders. Makes programming as easy as making a telephone call. Simply enter the number code associated with your television programme. This number is located in your favourite television listings magazine.

VIDEO Plus+ and PlusCode are registered trademarks of Gemstar Development Corporation. The VIDEO Plus+ system is manufactured under licence from Gemstar Development Corporation.

So that you can identify your machine for service questions or in the event of theft, enter the serial number here. The serial number (PROD.NO.) is printed on the type plate fixed at the back of the device.

MODEL NO.	VR620/07	PHILIPS	PHILIPS
PROD. NO.	.....		

Important information for customers in Great Britain

This set is fitted with an approved moulded 13 amp plug. To change the fuse in this plug or to attach a different plug, please proceed as follows:

1. Take off the fuse cover and remove the old fuse.
2. Insert a new fuse. Suitable fuses are those of the type BS 1362 3A, A.S.T.A. standard or BSI standard.
3. Close the fuse cover.

If the attached plug does not meet your requirements, you can cut it off and replace it with a suitable plug. Please observe the following conditions:

If your new plug uses a built-in fuse, this should be a 3A fuse.

If your new plug does not contain a built-in fuse, please do not use any fuses in your fusebox with a rating of more than 5A.

Please destroy the old, cut-off plug so that it cannot be used elsewhere.

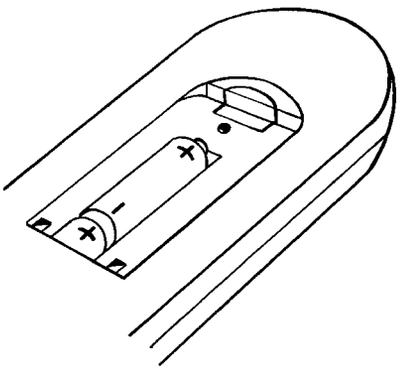
4. Connect the blue cable (neutral 'N') to the terminal in the plug which is marked with the letter 'N' or coloured black.
5. Connect the brown cable (live, 'L') to the terminal in the plug which is marked with the letter 'L' or coloured red.
6. Do not in any circumstances connect either of the two cables to the terminal in the plug which is marked with the letter 'E', the symbol "\" or coloured green or green / yellow.

Before you refit the plug cover, make sure, that the grip at the bottom of the plug is clamped over the plastic cover of the lead, not just over the two wires.

2 Connecting the video recorder

ENGLISH

Preparing the remote control for operation



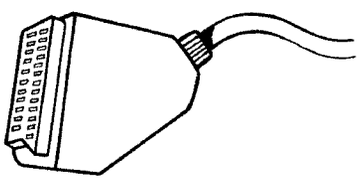
The remote control and its batteries are packed separately in the original video recorder packaging. You must install the batteries in the remote control before use - described in the following section.

1. Take the remote control and the enclosed batteries (2 batteries).
2. Open the remote control's battery compartment and place the batteries in it as shown in the picture and close the battery compartment.

The remote control is now ready to use. Its range is approximately 5 meters.

Connecting your video recorder to the TV set

The necessary cable connections must be made before you can record or playback TV programmes using your video recorder.
We recommend that you use a scart cable to connect your TV set and video recorder.



What is a scart cable?

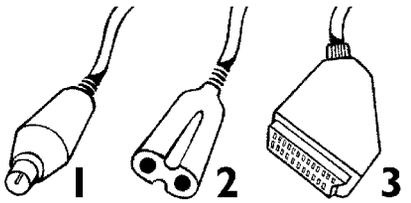
The scart or Euro AV cable serves as the universal connector for picture, sound and control signals. With this type of connection, there is practically no loss of quality during the picture or sound transfer.

When you install your video recorder for the first time, select one of the following options:

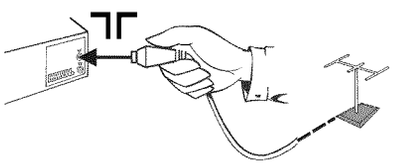
'Connecting with a scart cable'
If your TV set has a scart socket and you are using a scart cable.

'Connecting without a scart cable'
If you do **not** wish to use a scart cable.

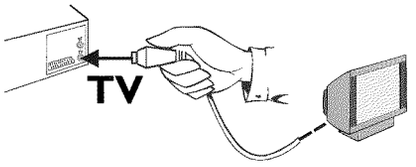
Connecting with a scart cable



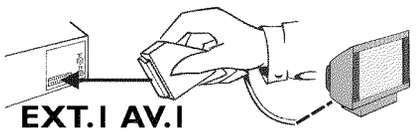
Have the following cables ready:
an aerial cable (1, supplied), a mains cable (2, supplied), a scart cable (3).



❶ Remove the aerial cable plug from your TV set. Insert it into the socket ⅂⌐ at the back of the video recorder.



❷ Insert one end of the supplied aerial cable into the socket **TV** at the back of the video recorder and the other end into the aerial input socket at the back of the TV set.



❸ Plug one end of a scart cable into the scart socket **EXT.1 AV. 1** at the back of the video recorder and the other end into the suitable scart socket on your TV set reserved for the video recorder operation (see your TV's operating instructions).

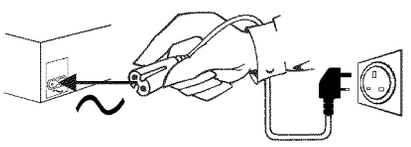
My TV set has several scart sockets. Which one should I use?

Select that scart socket which is suited for the video output as well as for the video input.

My TV offers me a selection menu for the scart socket.

Select 'TV' as a connection source of this scart socket.

❹ Switch on the TV set.



❺ Insert one end of the supplied mains cable into the mains socket ~ at the back of the video recorder and the other end into the wall socket.

❻ If the connection was properly made and your TV was **automatically switched** to the programme number for the scart socket, e.g. 'EXT', '0', 'AV', you will see the following picture:

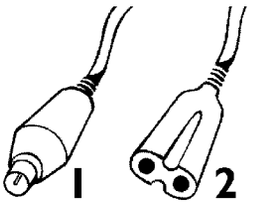
× My screen is empty

✓ Many TV sets are switched to the programme number for the scart socket by way of a control signal sent through the scart cable.

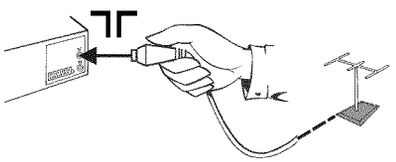
✓ If the TV set does not automatically switch to the scart socket programme number, manually change to the corresponding programme number on your TV set (see your TV's operating instructions).

Then, read the paragraph 'Initial installation' in the chapter 'Installing your video recorder'.

Connecting without a scart cable

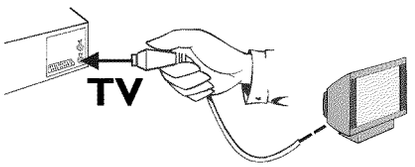


Have the following cables ready:
an aerial cable (1, supplied), a mains cable (2, supplied).

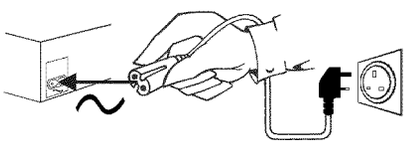


❶ Switch off your TV set.

❷ Remove the aerial cable plug from the aerial input socket of the TV set. Insert it into the socket ⅂⌐ at the back of the video recorder.



❸ Insert one end of the supplied aerial cable into the socket **TV** at the back of the video recorder and the other end into the aerial input socket at the back of the TV set.



❹ Insert one end of the supplied mains cable into the mains socket ∼ at the back of the video recorder and the other end into the wall socket.

❺ Switch on your TV set and select the programme number used for video playback on your TV set (see your TV's operating instructions).

Which programme number is used for video recorder operation?

To ensure the stability of the television picture during cassette playback (prevention of waves or streaks), special programme numbers have been set aside on the TV for the use of video recorders. This is usually the highest possible programme number, e.g. '12', '16', '99' or even programme number '0'. For more information, please see your TV's operating instructions.

❻ Select this programme number and manually start the TV's channel search as if you wanted to save a new TV channel until the 'test image' appears.

×I do not see a 'test screen'

✓ Check the cable connections.

✓ The video recorder 'transmits' on the 583MHz frequency (channel 35) Repeat the channel search on your TV set.

❼ Save this programme number setting on your TV set for video recorder operation.

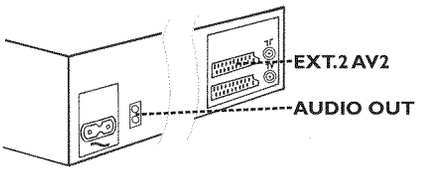
Programme number for video recorder operation

You have now saved a programme number for use by your video recorder as you would a regular TV channel. This programme number must now be used in future for video recorder playback ('video recorder' TV channel).

You can find more details in chapter 'Initial Installation'.

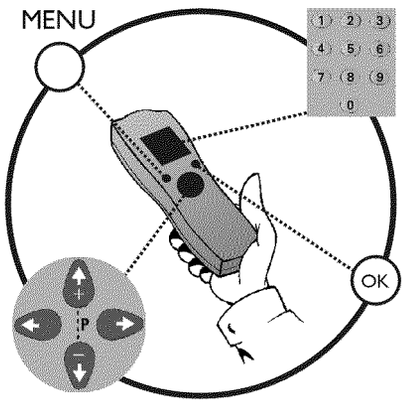
Connecting additional devices

You can connect additional devices such as decoders, satellite receivers, camcorders, etc. to the socket **EXT.2 AV. 2** .
Two audio sockets **AUDIO OUT L R** are located on the back of the video recorder (audio signal output left/right). These can be used to connect stereo systems.



3 Installing your video recording

ENGLISH



Initial installation

This chapter shows you how to start the initial installation. The video recorder automatically seeks out and stores all available TV channels.

'Aim' correctly

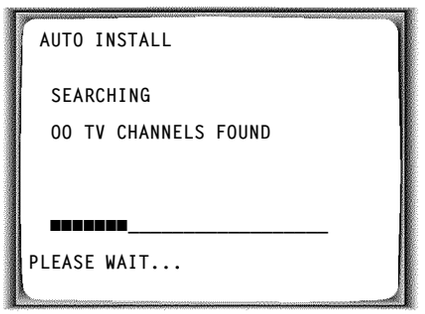
In the following sections, you require the remote control for the first time. When using, always aim the front of the remote control at the video recorder and not at the TV set.

Connecting additional devices

After you have connected additional devices (satellite receiver, etc.) through the aerial cable, switch them on. The automatic channel search will recognise them and save them.

❶ Confirm the image on the TV screen by pressing the **OK** button on the remote control.

Autoinstall starts. This picture will appear on the screen:



× **The video recorder does not find any TV channels during the search**

✓ Select channel 1 on the TV set. Can you see the saved TV channel on the TV set?
If not, check the cable connection of the aerial (aerial socket), video recorder, TV set.

✓ Please have patience.
The video recorder searches the entire frequency range in order to find and save the largest possible number of TV channels. It is possible that the TV channels in your country are broadcast in a higher frequency range. As soon as this range is reached during the search, the video recorder will find the TV channels.

❷ When 'Autoinstall' is complete, 'STORED' will briefly appear on the TV screen.

The initial installation is now complete.
Check the date and time. Please read 'Setting the time and date' in this chapter.

Satellite receiver

If you are connecting a satellite receiver, please read the section 'Using the satellite receiver'.

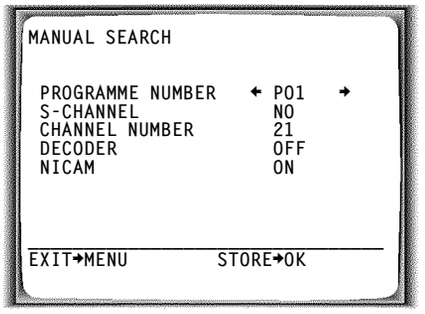
Decoder

If you are connecting a decoder, you must install it as described in the next section.

Decoder allocation

Some TV channels transmit encoded TV signals which can only be viewed with a commercially purchased or hired decoder without disturbances. You can connect such a decoder (descrambler) to this video recorder. The following function will automatically activate the connected decoder for the desired TV channel.

1. Switch the TV on. If applicable, select the programme number for the video recorder operation.
2. Use the buttons **↑+P** , **P−↓** on the video recorder or the number buttons **0-9** on the remote control to select the TV channel which you would like to allocate the decoder to.
3. Press the button **MENU** on the remote control. The main menu will appear.
4. Use the buttons **↑+P** or **P−↓** to select the line 'MANUAL SEARCH' and confirm with **OK** .



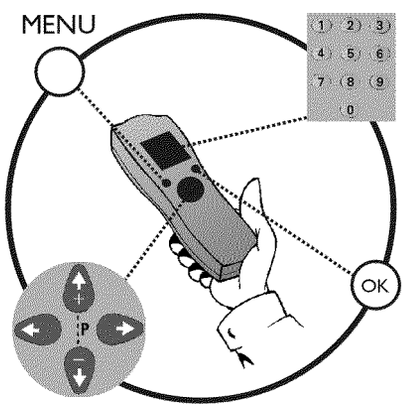
5. Use the buttons **P−↓** or **↑+P** to select the line 'DECODER'.
6. Use the buttons ← or → to select 'ON' (Decoder switched on).

How can I switch off the decoder?
Use the button → on the screen to select 'OFF' (Decoder switched off).

7. Confirm with **OK** .
8. End with the button **MENU** .

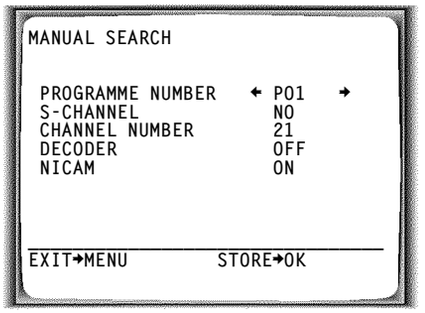
The decoder has now been allocated to this TV channel.
If this TV channel is chosen, the symbol 'DEC' will appear in the video recorder display.

Manual TV channel search



In some cases it could occur that all of the TV channels were not found and saved during the initial installation. In this case, the missing or coded TV channels must be searched for and stored manually.

1. Switch on the TV set. If required, select the programme number for the video recorder.
2. Press **MENU** on the remote control.
   The main menu will appear.
3. Select line 'MANUAL SEARCH' using **P −↓** or **↑+ P** and confirm with **OK** .



4. Select line 'PROGRAMME NUMBER' using **P −↓** or **↑+ P** .
5. Using ← or → , select the desired programme number that you want to use for the TV channel, e.g. 'P01'.
6. In line 'S-CHANNEL', select the desired display using → .

What is hidden behind the settings?

'NO': Display/Entry of channels
'YES': Display/Entry of special channels

What is a special channel?

TV channels are transmitted in certain pre-defined frequency ranges. These ranges are divided into channels. A specific frequency/channel is assigned to each TV station. Certain frequency ranges are specified as special channels (hyperband channels).

7. In line 'CHANNEL NUMBER', enter the channel of the desired TV station using the number buttons **0-9** .

×I don't know the channels for my TV stations

✓ In this case, press → in line 'CHANNEL NUMBER' to start the automatic channel search. A changing channel number will appear on the TV screen. Continue the automatic search until you have found the desired TV channel.

What is NICAM?

NICAM is a digital sound transmission system. Using NICAM, you can transmit either 1 stereo channel or 2 separate mono channels. However, if you experience poor reception resulting in sound disruptions, you can turn off NICAM.
In line 'NICAM', select 'OFF' using ← or → .

❽ Save the TV channel with **OK** . 'STORED' will briefly appear on the TV screen.

❾ To search for other TV channels, begin again at step ❸ .

❿ To end, press **MENU** .

Using the satellite receiver

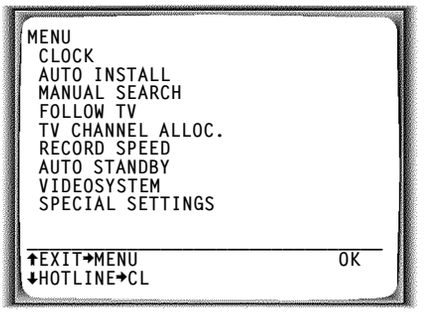
TV channels from a satellite receiver (connected to the scart socket **EXT.2 AV. 2**) are received on the video recorder on programme number 'E2'.
To do this, select programme number 'E1' with **0** on the remote control and then select programme number 'E2' with **P −↓** .
You should select the TV channels to be received by the satellite receiver directly on the receiver itself.

Sorting TV channels automatically (Follow TV)

When the automatic channel search function is activated, the TV channels are saved in a specific order. This may vary from the order of TV channels on the TV set.
This function changes the order of TV channels saved in the video recorder to match that of the TV set.
This only works if the video recorder (socket **EXT.1 AV. 1**) and the TV set **are connected with a scart cable**.

1. Switch on the TV set. If required, select the programme number for the video recorder.

2. Press the **MENU** button on the remote control. The main menu will appear.



3. Select line 'FOLLOW TV' using **P −↓** or **↑+ P** and confirm with **OK** .

4. Press the **OK** button. 'TV01' will appear in the video recorder display.

5. Select programme number '1' **on the TV set**.

×I cannot switch my TV set to programme number 'I'
✓ If you have connected additional devices to socket **EXT.2 AV. 2** , please disconnect these devices. Because of other connected devices, the TV set could switch to the programme number of the scart socket.

6. Confirm with **OK** on the video recorder remote control. The video recorder compares the TV channels on the TV set and the video recorder.
If the video recorder finds the same TV channel as on the TV set, then it stores it at 'P01'.

× **'NOTV' will appear in the display. The video recorder is not receiving a video signal from the TV set.**

✓ Check the plug on the scart cable.

✓ Check your TV's operating instructions to see which scart socket is used for video signals.

✓ If this does not help, it's not possible to use this function.
Please read the section 'Sorting TV channels manually'.

7 Wait until the next number, e.g. 'TV02' appears in the display.

8 Select the next programme number **on the TV set**, e.g. '2'.

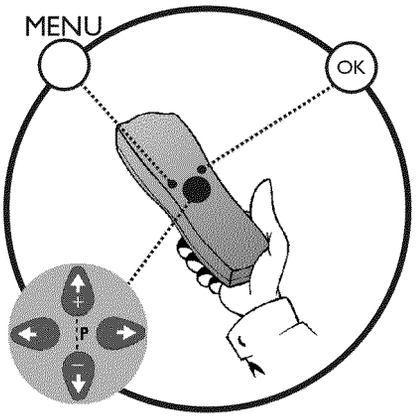
9 Confirm with **OK** on the video recorder remote control.

Deleting sorting

You can delete an incorrect TV channel sorting by pressing **CLEAR (CL)** .

10 Repeat steps 7 to 9 until you have assigned a programme number to all TV channels.

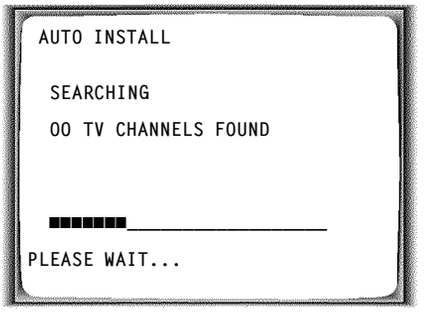
11 To end, press **MENU** .



Automatic TV channel search (Autoinstall)

During installation, all available TV channels are searched for and saved. If the channel assignments of your cable or satellite TV provider change or if you are reinstalling the video recorder, e.g. after moving house, you can start this procedure again. This will replace the TV channels already saved with the new ones.

1. Switch on the TV set. If required, select the programme number for the video recorder.
2. Press the **MENU** button on the remote control. The main menu will appear.
3. Select line 'AUTO INSTALL' using **P −↓** or **↑+ P** .
4. Press **OK** .
5. 'Autoinstall' starts. Wait until all TV channels have been found. This can take several minutes.



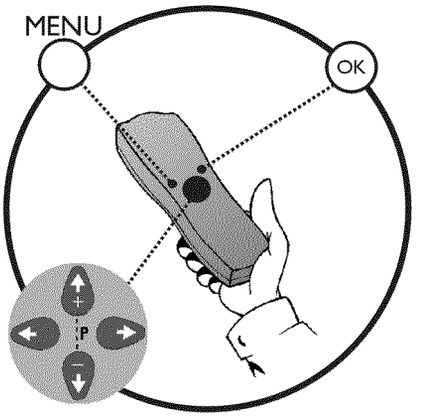
6. When Autoinstall is complete, 'STORED' will briefly appear on the TV screen.
   Date and time have been set and saved.
7. To end, press **MENU** .

You can read about how to search for a TV channel manually in the section 'Manual TV channel search'.

Monitor function

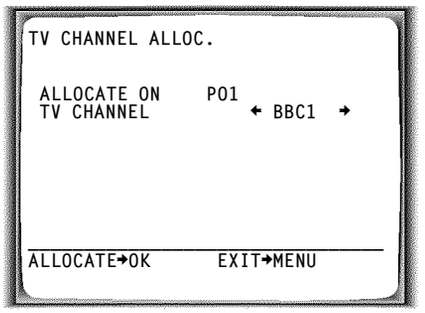
You can switch back and forth between the TV picture and video recorder picture with **MONITOR** . But this only works when you use a scart cable to connect the video recorder to your TV set and your TV set responds to this switch-over.

Sorting and clearing TV channels manually



After you have performed the automatic channel search you may not agree with the sequence in which the individual TV channels have been allocated to the programme positions (programme numbers) of the video recorder. You can use this function to individually sort the TV channels already saved or to delete unwanted TV channels or those with poor reception.

1. Switch on the TV set. If required, select the programme number for the video recorder.
2. Press **MENU** on the remote control. The main menu will appear.
3. Select line 'TV CHANNEL ALLOC.' using **P −↓** or **↑+ P** .
4. Confirm with **OK** .



5. Using ← or → , select the saved TV channel that you want to assign to the programme number 'P01'.
6. Confirm with **OK** . The following message will briefly appear on the TV screen: 'ALLOCATED ON P01'.
7. Then the sorting for the next highest programme number will appear on the screen, e.g. 'ALLOCATE ON P02'.
8. Using ← or → , select the saved TV channel that you want to assign to this programme number, e.g. 'P02'.

Deleting TV channels

Using **CLEAR (CL)** you can delete unwanted TV channels or those with poor reception.

9 Confirm with **OK**. The following message will briefly appear on the TV screen: 'STORED'.

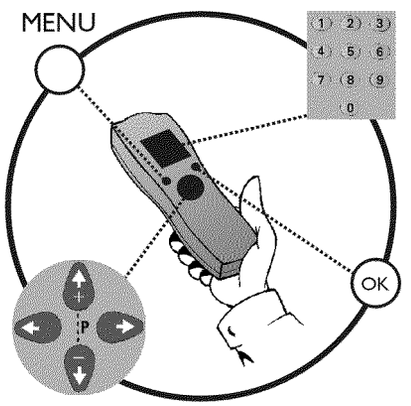
× **The main menu will appear on the screen**

✓ After you have confirmed the last channel that can be sorted, you will automatically return to the main menu since no more TV channels can be assigned.

10 To assign other TV channels to a programme number, repeat steps 7 to 9.

11 Confirm the assignment of the TV channel with **MENU**.

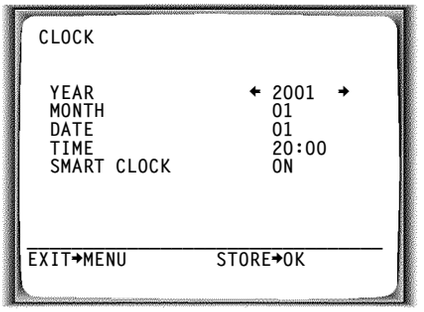
12 To exit the main menu, press **MENU**.



Setting the time and date

If the display shows an incorrect time or '--:--', the time and date must be reset manually.
If a TV channel which transmits TXT/PDC (teletext/PDC) is stored under programme number 'P01', time/date will automatically be taken from the TXT/PDC information. (SMART CLOCK)

1. Switch on the TV set. If required, select the programme number for the video recorder.
2. Press **MENU** on the remote control. The main menu will appear.
3. Select line 'CLOCK' using **P −↓** or **↑+ P** and confirm with **OK** .



4. Check the year in line 'YEAR'. If required, please change the year with the number buttons **0-9** on the remote control.
5. Select the next line with **↑+ P** or **P −↓** .
6. Check 'MONTH', 'DATE' and 'TIME' in the same way.

× Time/date is displayed incorrectly despite manual setting

✓ With Smart Clock, time/date is transferred from the TV channel saved on 'P01' and automatically corrected.
Switch off Smart Clock. In line 'SMART CLOCK', select 'OFF' using ← or → .
You can switch on 'SMART CLOCK' again when you select 'ON'.

7. Check the displayed settings and confirm with **OK** .
'STORED' will appear briefly on the screen.
8. To end, press **MENU** .

4 Important notes for operation

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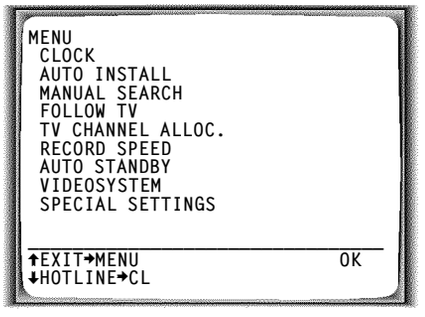
Switching on	You can switch on the video recorder with the **STANDBY/ON** ⏻ button, the number buttons **0-9** or by putting in a cassette.
Automatic switch-off	If the video recorder is not used for several minutes, it switches itself off automatically. This function can be deactivated (e.g. if you want to use the video recorder as a TV receiver). For more information, please read the section 'Automatic switch-off' in chapter 'Additional functions'.
Time in the display	If you have switched the video recorder off with **STANDBY/ON** ⏻ , the time will show in the display, e.g. '18:00'. If the clock has not been set, '--:--' will appear. When the video recorder is switched off and the time isn't shown in the video recorder display, the clock display may be switched off. You will find more information in the chapter 'Additional functions' section 'Switch off the clock display'.
Energy consumption	The video recorder should always be connected to the mains so as not to affect the use of the TV or programmed recordings. Your video recorder uses less than 4W (with clock display switched off).
Power outage/no power	Channel information remains saved for up to 1 year, the time and timer information is saved for up to 3 hours.
Emergency exit	The video recorder and the remote control have the option of an 'Emergency exit'. You can use the **STANDBY/ON** ⏻ button to interrupt any function or step during use. You can operate your device without worry. There is no risk whatsoever of damaging the video recorder by performing user steps incorrectly.

Navigation in the screen menu

You can check/change many functions and settings of your video recorder via the screen menu. The individual functions are selected as follows:



Call up the menu: with **MENU** .

To select: with **P −↓** or **↑+P** .

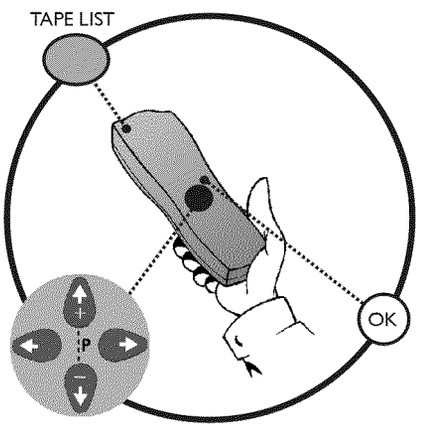
To enter or change your selection: with the number buttons **0-9** or with ← or → .

To save or confirm: with **OK** .

To cancel: with **STANDBY/ON** ⏻ .

To end: with **MENU** .

5 Tape List



General information

The 'Tape List is an integrated database in the video recorder that remembers all recordings made by this video recorder. The Tape List helps you keep track of which film is on which cassette. The 'Tape List' also gives you quick and easy access to recordings.
And: If desired, the video recorder will rewind to the beginning of the selected recording and automatically start playback.

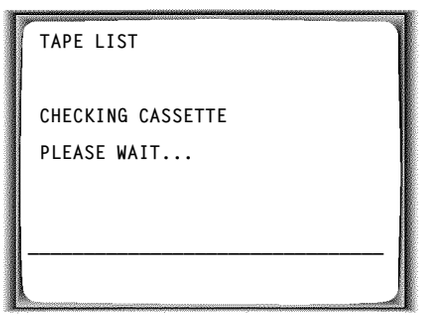
Can I add cassettes that already have recordings on them to the Tape List?

Yes. Tape List can manage a maximum of 9 cassettes. However, there must be recordings on the cassettes in order to copy them to the Tape List database.

Adding a cassette to the Tape List

You can add any cassette to the 'Tape List'. Please note that the process for adding cassettes that already have recordings on them lasts longer than with new (blank) cassettes.

1. Switch on the TV set. If required, select the programme number for the video recorder.
2. Label the cassette to be inserted with a number from 1 to 9.
3. Insert the cassette into the video recorder.
4. '*TAPE -*' will appear in the display.



5. Enter the cassette number using the **0-9** number buttons on the remote control.
The video recorder will briefly check the cassette inserted. 'CHECKING CASSETTE' appears on the TV screen.
If the cassette is new (blank), no information will appear on the screen.

× I see a cassette number and an overview of all recordings on this cassette

✓ You have selected a number which has already been included in the Tape Manager and contains a recording.

On the screen after 'CHECKING CASSETTE' I see the message "
There are already recordings on the cassette. This cassette is searched for recordings and added to the Tape List.

Why must I note the cassette number?

When searching for available recordings, you will need to insert the corresponding cassettes (cassette numbers).

How many cassettes can I save in the Tape List?

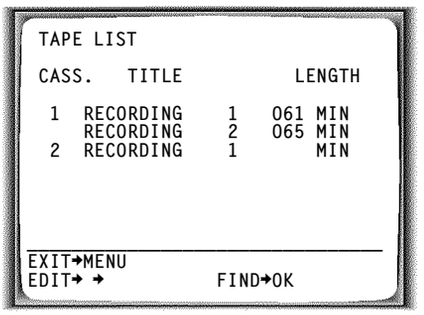
You can store up to 9 cassettes. You can store a maximum number of 50 titles in the Tape Manager.

× I see the message 'TAPE LIST- MEMORY FULL' on the screen

✓ The maximum of cassettes/titles is reached. You cannot add any cassette. It isn't possible any more to store recordings in the Tape List.
If you want to use the Tape List again, please, delete titles (recordings) or cassettes out of the Tape List.

Editing recording titles

In the Tape List, all recordings longer than 10 minutes are displayed with cassette number, recording title and length of recording. The TV channel, time and date are saved as a title. The title of this recording can only be changed after the recording has been completed.
To do this, the corresponding cassette does not have to be in the video recorder. In the following, you will read how to customise the titles to your wishes.



❶ Press **TAPE LIST** on the remote control. An overview of all saved titles/cassettes from the Tape List appears on the screen.

× I can see the message 'TAPE LIST- MEMORY EMPTY'

✓ There are no recordings saved in the Tape List. Therefore, it is not possible to add or change a title.

❷ Using **↑+P** or **P−↓** select the title to be edited and confirm with **→** .

❸ Using **→** or **←** select the position where the letter/number/symbol is to be changed or re-entered.

❹ Change the desired symbol using **↑+P** or **P−↓** .

Deleting symbols

To delete all symbols of a recording title, press **CLEAR (CL)** at a symbol position.

5. Repeat step 3 and step 4 until you have made the desired changes.

6. Save the new title with **OK**.

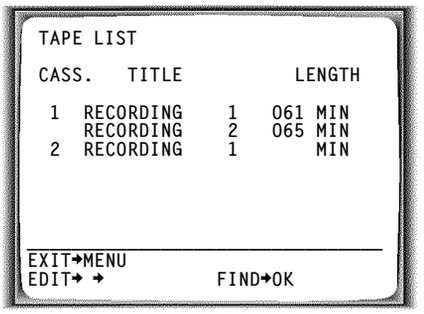
7. If you want to change more titles, repeat step 3 through step 7.

8. To end, press **TAPE LIST**.

Searching for a title in the Tape List

This function can be used to quickly and easily find and play back a recording saved in the Tape List. The video recorder automatically rewinds to the beginning of the selected recording and automatically starts playback.

1. Press **TAPE LIST** on the remote control.



2. An overview of all recordings saved in Tape List appears on the screen.

What do the displays on the screen mean?

'CASS.' = Cassette number
'TITLE' = Title (TV channel, time, date)
'LENGTH' = Length of the recording

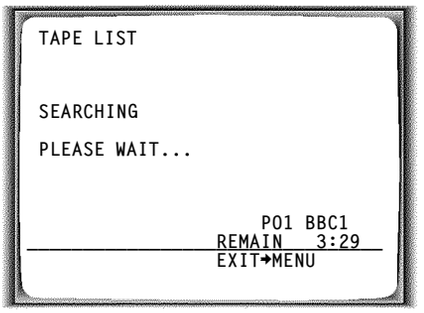
3. Select the title that you want to play back with **P −↓** or **↑+P**.

× I see the message 'INSERT CASSETTE X' on the screen

✓ The selected recording is located on the Tape List cassette with the displayed cassette number. Please insert the corresponding cassette. After a brief check, the video recorder will rewind to the beginning of the selected recording and start playback.

× I want to cancel the search

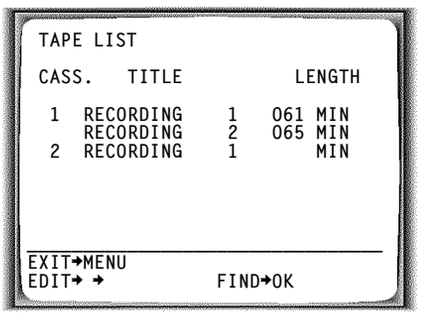
✓ If you want to cancel the search, press **MENU**.



4. Confirm with **OK**. The video recorder winds to the start of the selected recording and automatically starts playback.

Removing a title from the Tape List

You can delete titles not used any longer to create space in the memory of the Tape List for new recordings. If all titles of a cassette are deleted, also the cassette number will be removed from the Tape List.

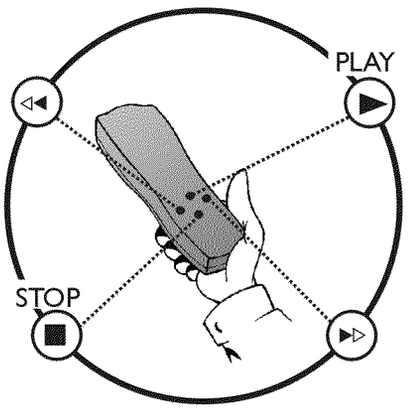


1. Press **TAPE LIST** on the remote control.
2. An overview of all recordings saved in Tape List appears on the screen.
3. Select with **P −↓** or **↑+ P** the title to be deleted.
4. Press **CLEAR (CL)** .

Cassette contents are not deleted!

The title was only removed from the Tape List memory. Its contents remain unchanged!

6 Playback

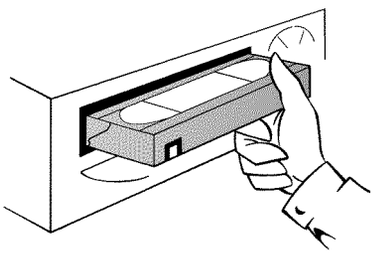


Playing cassettes

You can use this video recorder to play back recorded VHS video cassettes. You can operate the video recorder using the remote control or the buttons on the front of the video recorder.

What does VHS mean?

'Video Home System' (VHS) has become the world-wide standard for the playback and recording of amateur video cassettes. This popular standard continues to be improved. Super VHS (S-VHS) provides a sharper picture and less noise. Digital VHS (D-VHS) works with digital picture and sound signals. Your video recorder can only record and play standard VHS cassettes.

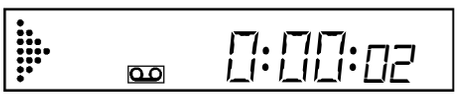


1 Put a cassette into the cassette slot.
The cassette is inserted automatically. ' ' will appear on the display.

× I see 'TAPE-' in the display

✓ The video recorder is waiting for you to enter a cassette number from the 'Tape List'. You can find more information on the Tape List in the chapter 'Tape List'. If you don't use the Tape List, interrupt with **STOP ■** or **PLAY ►** .

2 Press the Play button **PLAY ►** to view the tape.
This will, for example, appear in the display:



× Picture/ sound quality is poor

✓ When playing rental videos or older, poorer quality cassettes, it may not be possible to completely filter out picture and sound interference. This is not a fault in your machine.
Read the chapter 'Eliminating picture interference'.

✓ During playback the automatic TV system will switch-over automatically. If picture/sound interference occurs, attempt to fix the problem by manually switching the TV system. In that case, turn to chapter 'Additional functions' section 'Switching the video (color) system'.

3 To stop the playback, press **STOP ■** on the remote control or **STOP/EJECT ■/▲** on the video recorder.

4 To eject the cassette, press **STOP/EJECT ■/▲** on the video recorder when the video recorder stops the playback (STOP).

Automatic switch-off of special functions

Many functions (e.g. pause, still picture, search) switch themselves off automatically after a short time in order to protect the cassette and to save energy.

Do I need to change the playback speed when playing back LP recordings?

For playback, the correct recording speed 'SP' will automatically be selected. For more information, please read the section 'Selecting the recording speed (SP/LP)' in the chapter 'Manual recording'.

Playing back NTSC cassettes

Cassettes that have been recorded in the NTSC standard (for example, American cassettes) can be played back using this video recorder. However, this only works on PAL-television sets which are suitable for a picture frequency of 60Hz.
When you play an NTSC cassette '60HZ' will appear on the display.
Some special features (for example, still picture) are not possible while you are playing an NTSC cassette.

Displaying current tape position

The display shows the tape position in hours, minutes and seconds. In addition, by pressing **OK** you can show the present tape position on the TV screen.
The following information is displayed on the screen:
e.g.: 0:02:45 Shows the tape position in hours, minutes and seconds.
Moving/blinking arrow: This indicates the current tape position. The arrow moves in a line from left (tape start) to right (tape end).
'REMAIN 0:06': will show the actual amount of playing/recording time left on the tape in hours and minutes.
When you play an NTSC cassette, the video recorder will not show 'REMAIN 0:06'.

How can I set the counter to '0:00:00'?

You can set the counter to '0:00:00' using **CLEAR (CL)** .
When you put a cassette in the machine, the counter will automatically reset to 0:00:00'.

× The counter does not move

✓ This occurs when there are no recordings on a portion of a tape. Therefore, the video recorder cannot receive any information from the tape. This is not a fault in your machine.

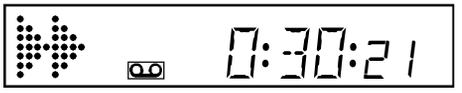
× The display/the screen shows '-0:01:20'

✓ If you rewind a cassette from the tape position '0:00:00', the counter will show for instance, '-0:01:20' (the cassette will be rewound to 1 minute and 20 seconds before '0:00:00').

× '-:--' is displayed in the 'REMAIN' counter

✓ This counter will automatically recognise the length of the tape. In addition, when you put in a cassette the video recorder must first calculate the time played. Therefore, '-:--' appears first and only after the tape has been running for a few seconds will the correct playing time be shown.

Searching for a tape position with picture (scanning)



1. While a cassette is playing, press ◁◀ (reverse) or ▶▷ (forward) one or more times. This will, for example, appear in the display:

2. To stop at a certain place on the tape, press **PLAY ►** .

Decreased picture quality

Scanning interferes with the picture quality. The sound is switched off. This is not a fault in your machine.

Still picture / slow motion

1. During playback, press **STILL ▶|◀** to stop the tape and display a still picture. This will, for example, appear in the display:

2. Each time you press **STILL ▶|◀** , the picture will advance one frame.

3. When you hold down the **STILL ▶|◀** button, the tape will be played in slow motion.

4. When you press ▶▷ several times, you have a choice of several playback speeds for slow motion.

5. To continue playback, press **PLAY ►** .

Searching for tape position without picture (forward wind and rewind)

1. Stop the tape with **STOP ■** .
2. Press ◁◀ (reverse) or ▶▷ (forward). This will, for example, appear in the display:
3. To stop at a certain place on the tape, press **STOP ■** .

Instant View

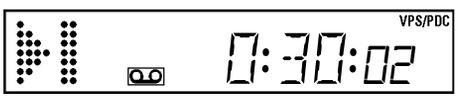
With this function you can switch to picture search during wind and rewind.

1. If you hold ◁◀ (rewind) or ▶▷ (wind) during wind or rewind, you will switch to picture search.
2. As soon as you release the button, the video recorder will automatically switch back to rewind or wind.

Automatic search for a tape position (index search)

Every time a tape is recorded an index marking is written on the tape. This marking can be compared with a bookmark. These marked positions can be found again quickly and easily later by pressing a button.

1. To search for the previous marking, press **INDEX ▶I** and then ◁◀ .



2. For the next marking, press **INDEX ▶I** and then ▶▷ . This will, for example, appear in the display for the next marking.
3. As soon as the video recorder finds this marking, it automatically switches to playback.

Automatic search for a blank space on the tape

You can search for space on the tape (at least 1 minute of blank tape) for a new recording, for example, after an existing recording on the tape.

1. Press **INDEX ▶I** . Then press **STOP ■** . This will, for example, appear in the display:

2. As soon as the video recorder finds the corresponding tape position, it automatically switches to pause.

× The cassette is ejected

✓ The video recorder was unable to find any blank space on the tape inserted.

7 Eliminating picture interference

ENGLISH

Optimising tracking

This video recorder has an automatic tracking function. In order for the video heads to optimally read the video track of the newly inserted video cassette, the tape speed is slightly corrected automatically.
In some cases however, interference will still occur.
The following section will explain how to manually adjust the tracking settings.

1. While a cassette is playing, hold ↑+P until 'TRAC' (TRACking) appears in the display.
2. Hold down the buttons ↑+P or P−↓ until the playback quality is at its best.
3. Wait a few seconds, until 'TRAC' disappears from the display.

These selected picture settings will not change until you eject the cassette.

Optimising still picture

If the still picture vibrates vertically, you can improve the still picture as follows:

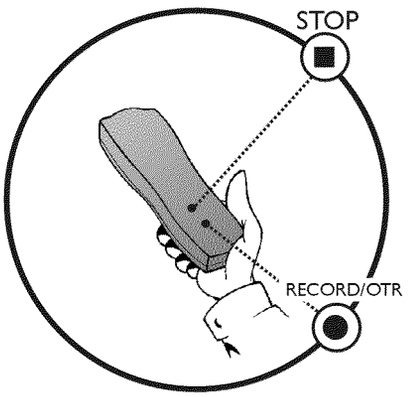
1. During still picture, hold ↑+P or P−↓ until the picture quality is at its best.
   'JITT' will appear in the display.
2. When you release the button, 'JITT' will disappear.

The video recorder will store these settings automatically.

×I cannot reach optimal quality for the still picture

✓ Interference which cannot be alleviated by this function can occur in cassettes of poor quality or camcorder cassettes .

8 Manual recording



General information

Use 'Manual Recording' to make a spontaneous recording (for example, a programme currently being shown).

If you want to start and stop a recording manually, read the section **'Recording without automatic switch-off'**.

If you want to start a recording manually but have it stopped automatically, read the section **'Recording with automatic switch-off'**. (e.g. not to record to the end of the tape)

Read the section **'Direct record'** if you want to record a programme currently being shown.

Read the section **'Automatic recording from a satellite receiver'**, if you want a recording to be controlled automatically by a satellite receiver.

Recording without automatic switch-off

1 Insert a cassette.

Using 'Tape List'

To save a recording in the 'Tape List' or to use a 'Tape List' cassette, enter the cassette number using the number buttons **0-9** on the remote control. The cassette is being checked. You can find more information on the 'Tape List' in the chapter 'Tape List'. If you don't use the Tape List, interrupt with **STOP ■** .

2 Use **↑+P** or **P−↓** to select the programme number you want to record, for example, 'P01'. This will appear on the display:

Station name

If a TV station transmits a station name, it will be shown in the display.

Programme numbers 'E1' 'E2'

This programme number is provided for recording from external sources (via the scart socket **EXT.1 AV. 1** , **EXT.2 AV. 2**) .

Programme number 'E3'

This programme number is used for recording from the audio and video front sockets.

3 To start recording, press **RECORD/OTR ●** on the remote control or **RECORD ●** on the video recorder. This will, for example, appear in the display:

Displaying tape position

Using **OK** you can show the tape position in the display.

4 Stop recording with **STOP ■** .

Recording with automatic switch-off (OTR One-Touch-Recording)

1 Insert a cassette.

Using 'Tape List'

To save a recording in the 'Tape List' or to use a 'Tape List' cassette, enter the cassette number using the number buttons **0-9** on the remote control. The cassette is being checked. You can find more information on the 'Tape List' in the chapter 'Tape List'. If you don't use the Tape List, interrupt with **STOP ■** .

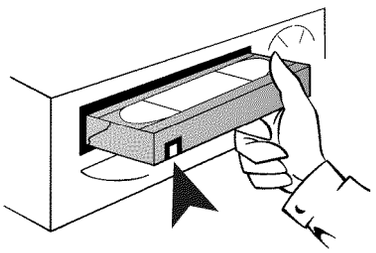
2 Use **↑+P** or **P−↓** to select the programme number you want to record.

3 Press **RECORD/OTR ●** on the remote control.

4 Each time you press **RECORD/OTR ●** you will add 30 minutes to the recording time.

How can I clear the recording time just setted?

To delete an entry, press **CLEAR (CL)** while the display shows the recording time.



Preventing accidental erasing of cassettes

All cassettes (except for rental and store cassettes) have a security tab on the back of the cassette (see arrow).
To prevent recording over important recordings (erasing), you can remove this security tab or slide it to the left.
If you later decide to record on a protected cassette, simply cover the hole with adhesive tape or slide the tab to the right.

Lining up recordings (assemble cut)

When you add a further recording to a cassette, which already has a recording on it, a short blank (flicker) can appear between the old and the new recording or the picture itself can flicker. To help reduce these from occurring, proceed as follows:

1. Find the tape position of the old recording where you want to insert the new recording.
2. Look at the last minute of the old recording (playback).
3. Press **STOP** ■ on the remote control at the tape position where the new recording is to go. **II** ' will appear on the display.
4. Now start recording as usual by pressing **RECORD/OTR** ● on the remote control.
5. Stop recording with **STOP** ■ .

Selecting the recording speed (SP or LP)

You can reduce the recording speed by half. This makes it possible to record, for example, eight-hours instead of four-hours on an 'E240' (four-hour) cassette.
For playback, the correct recording speed will automatically be selected.

1. Switch on the TV set. If required, select the programme number for the video recorder.
2. Press **MENU** on the remote control. The main menu will appear.
3. Select line 'RECORD SPEED' using **P −** ↓ or ↑ **+ P** and confirm with **OK** .
4. Select the required recording speed with ← or → .

'SP'/'LP' AUTO'

'SP': **S**tandard**P**lay (normal recording speed) offers the usual first-class picture quality.

'LP': **L**ong**P**lay (half recording speed, double recording time). 8 hours can be recorded on a 4 hour cassette (E240) with a somewhat reduced picture quality.

'AUTO': **AUTO**matic Long Play. If there is not enough space on the tape to record a programmed recording in standard speed, the recording will automatically be made in 'LP' (Longplay). Otherwise, the recording speed will be 'SP' (Standardplay).

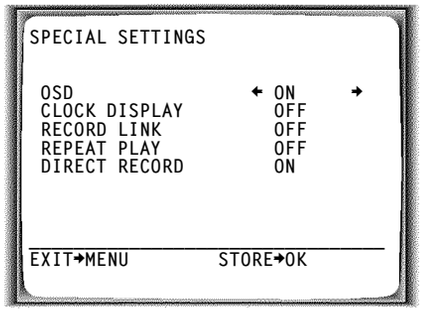
5. Confirm with **OK** .
6. To end, press **MENU** .

ENGLISH

Automatic controlled recording from a satellite receiver (RECORD LINK)

This function automatically starts recording on the switched-off video recorder when a video signal is recognised through the connected scart cable. If your satellite receiver has a programming function, the recording will start automatically (as long as the satellite receiver is switched on).

1. Switch on the TV set. If required, select the programme number for the video recorder.
2. Press **MENU** on the remote control. The main menu will appear.
3. Select line 'SPECIAL SETTINGS' using **P −↓** or **↑+ P** and confirm with **OK** .



4. Select line 'RECORD LINK' using **P −↓** or **↑+ P** .
5. Select function 'ON' with ← or → .

Switching off 'Record Link'
To switch off the function, select 'OFF'.

6. Confirm with **OK** .
7. To end, press **MENU** .
8. Insert a cassette.
9. Use a scart cable to connect scart socket **EXT.2 AV. 2** on the video recorder to the corresponding scart socket on the satellite receiver.
10. Programme the satellite receiver with the required information (programme number of the TV channel, start time, end time).
If necessary, please see the operating instructions for your satellite receiver.
11. Switch off the video recorder with **STANDBY/ON** ⏻ .

The video recorder is now ready to record. The beginning and end of the recording is controlled via scart socket **EXT.2 AV. 2** .
When this function is switched on, ' 🔕 ' will appear on the video recorder display.

'Direct Record'

Can you record the right TV channel in seconds when the video recorder is switched off? No problem. If recording is started manually, the **switched-off** video recorder uses the current TV channel setted on the TV set.
You will find more information on how to switch 'Direct record' on or off in the next section 'Direct record'.

How does Direct Record work?

The video recorder compares the TV channel selected on the TV set with its stored TV channels via the scart cable. If the same TV channel is found, it switches the video recorder to the corresponding programme number and starts recording.

Please do not change the TV channel on the TV set during the search so as not to affect the process.

1. On the TV set, select the programme number you want make the recording from.

2. Press **RECORD/OTR ●** with the video recorder **switched off**.

× A 'search symbol' appears in the display (a moving symbol)

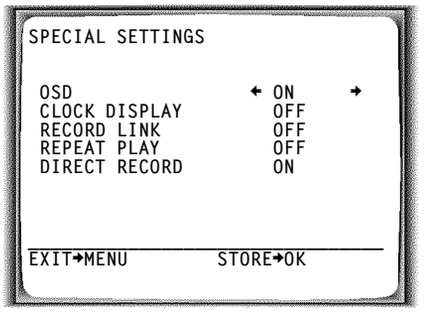
✓ The video recorder is comparing its saved TV channels with those of the TV set. Please do not change the TV channel on the TV set as long as the 'search symbol' (a moving symbol) is being displayed.

× 'NOTV' appears in the display

✓ This TV channel could not be found in the video recorder's memory. Check that all TV channels saved on the TV set are available in the video recorder. If required, save any missing channels. Please read the section 'Manual TV channel search'.

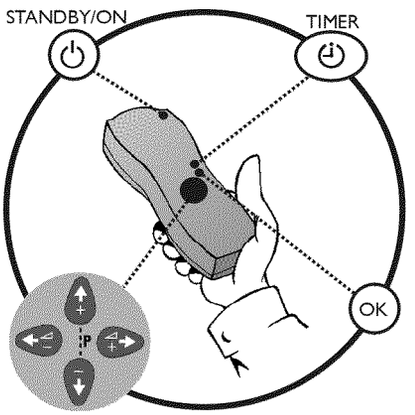
3. Stop recording with **STOP ■** .

Switching 'Direct Record' on or off



1. Switch on the TV set. If required, select the programme number for the video recorder.
2. Press **MENU** on the remote control. The main menu will appear.
3. Select line 'SPECIAL SETTINGS' using **P −** ↓ or ↑ **+ P** and confirm with **OK**.
4. In line 'DIRECT RECORD', select 'OFF' (Direct Record off) or 'ON' (Direct Record on) using ← or → .
5. Confirm with **OK**.
6. To end, press **MENU**.
7. Switch off with **STANDBY/ON** ⏻ .

9 Programming a recording (TIMER)



General information

Use programming a recording (TIMER) to automatically start and stop a recording at a later date. The video recorder will switch to the right programme number and begin recording at the correct time.
With this video recorder, you can pre-programme up to six recordings within a period of one month.

To make a programmed recording, your video recorder needs to know:
* the date you want to make the recording
* the programme number of the TV channel
* the start and stop time of the recording

This information is saved in a 'TIMER block'.

What is 'VPS/PDC'?

'VPS' (Video Programming System)/ 'PDC'(Programme Delivery Control) are used to control the start and duration of TV channel recordings. If a TV programme starts earlier or ends later, the video recorder will then turn on and off and the correct time.

What do I need to know about 'VPS/PDC'?

You must enter the start time **exactly to the minute**.
If you want to programme a time that is different from the VPS or PDC time, you must switch off VPS or PDC.

Only one TV program of a TV channel can be controlled using 'VPS/PDC' at a time. If you want to record two or more TV programmes on a TV channel using 'VPS/PDC', you will need to programme these as two separate recordings.

Programming a recording (with 'VIDEO Plus+')

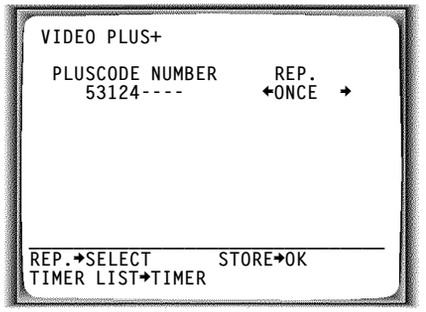
VIDEO Plus+™

Thanks to this programming system, you no longer need to tediously enter the date, programme number, start and end time. All the information needed for programming is contained in the PlusCode-programming number. This 9-digit PlusCode number is found in every TV listings magazine.

1. Switch on the TV set. If required, select the programme number for the video recorder.

2. Press **TIMER** ⏲ on the remote control.

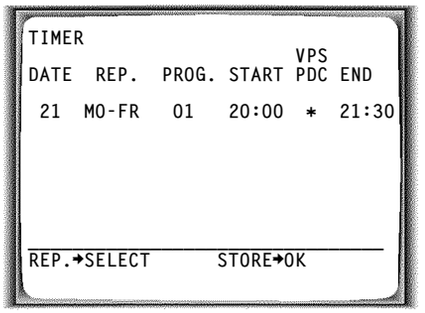
3. Enter the entire PlusCode number. This number is up to 9 digits long and can be found next to the start time of the TV programme in your TV listings magazine.
   e.g. 5-234-89 or 5.234 89
   Enter 523489 for the PlusCode number.
   If you make a mistake, you can clear your instructions with **CLEAR (CL)** .



Selecting onetime/daily/weekly recordings

Using **SELECT** , select from the following options:
'ONCE': Recording once
'MO-FR': Repeated daily recordings (Monday to Friday)
'WEEK.': Repeated weekly recordings (every week on the same day)

4. Confirm with **OK** .



× **The following message appears on the screen:** 'SELECT PROG. NR.'

✓ The programme number of the TV channel has not yet been assigned to the PlusCode number. Using the number buttons **0-9** on the remote control, select the corresponding programme number (programme name) of the TV channel and confirm with **OK**.

× **The following message appears on the screen:** 'PLUSCODE NUMBER NOT VALID'

✓ The entered PlusCode number is incorrect. Correct your instructions or end with **MENU**.

✓ Check the time/date (see chapter 'Installing your video', section 'Setting the time and date').

× **The following message appears on the screen:** 'MO-FR PROGRAMMING NOT POSSIBLE FOR WEEKEND'

✓ A daily recording was entered for the wrong day. Daily programming can only be used for recordings to be made from Monday to Friday.

5 The decoded data appears after confirmation. You can go back to change the data. Select the corresponding input field using → or ←. Change the data with ↑+P, P−↓ or with the number buttons **0-9**.

Switching on 'VPS/PDC' in the 'START' input field

Select the 'START' input field using →. Using **SELECT** switch on 'VPS/PDC' ('*' lights up). If you press **SELECT** again, you will switch 'VPS/PDC' off ('*' goes out).

6 When all informations are correctly, confirm with **OK**. The programming information is stored in a TIMER block.

7 Insert a cassette with an intact security tab (unprotected).

Using 'Tape List'

To save a recording in the 'Tape List' or to use a 'Tape List' cassette, enter the cassette number using the number buttons **0-9** on the remote control.
The cassette is being checked. You can find more information on the 'Tape List' in the chapter 'Tape List'. If you don't use the Tape List, interrupt with **STOP** ■.

8 Switch off with **STANDBY/ON** ⏻.
The programmed recording will only function when the video recorder is **switched off** with **STANDBY/ON** ⏻.
If any of the TIMER blocks are in use, '⏻' will light up on the video recorder display.

Problems and solutions for programmed recordings

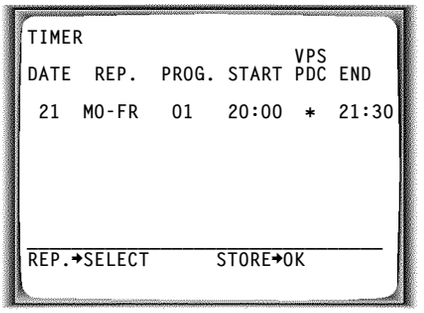
PROBLEM	SOLUTION
The video recorder will not operate	✓While a programmed recording is being made, you cannot operate your video recorder manually. If you want to cancel the programmed recording, press **STANDBY/ON** ⏻ .
'SWITCH TO STANDBY- TIMER RECORDING' **flashes on the TV screen**	✓The video recorder was switched on several minutes before the start of a programmed recording. Switch off the video recorder with **STANDBY/ON** ⏻ . A programmed recording (timer) will only function if the video recorder is switched off.
Cassette is ejected during recording	✓The end of the tape was reached during recording.
Error message: 'NO CASSETTE' ⏲ ' **will flash in the video recorder display**	✓No cassette was inserted. Insert a cassette and switch off the video recorder using **STANDBY/ON** ⏻ .
Cassette was ejected as soon as the OK button was pressed	✓A cassette was inserted with the security tab removed. Undo the erase protection (chapter 'Manual Recording', section 'Preventing accidental erasing of cassettes') or insert a different cassette.
Error message: 'ALL TIMERS OCCUPIED'	✓If this error message appears after pressing **TIMER** ⏲ , then all TIMER blocks are already programmed. No more recordings can be programmed. If you want to clear a programmed recording (TIMER block), select it with **↑+P** or **P−↓** and then press **CLEAR (CL)** .

Programming a recording (without VIDEO Plus+)

1. Switch on the TV set. If required, select the programme number for the video recorder.

2. Press **TIMER** ⏲ on the remote control **twice** . A free TIMER block will be highlighted.

3. Press **TIMER** ⏲ . The information will appear on the screen.



4. With **TIMER** ⏲ , → or ← you can select 'DATE' (date), 'PROG.' (programme number), 'START' (start time) and 'END' (end time).
Enter or change your information with **↑+P** or **P−↓** , or with the number buttons **0-9** on the remote control.

Selecting onetime/daily/weekly recordings

In 'DATE' use **SELECT** to select from the following options:
'ONCE': Recording once
'MO-FR': Repeated daily recordings from Monday to Friday
'WEEK.': Repeated weekly recordings (every week on the same day)

Programme numbers of the 'E1' and 'E2' scart socket

You can also programme recordings from external sources via scart socket **EXT.1 AV. 1** ('E1') or **EXT.2 AV. 2** ('E2').

'Switching on 'VPS/PDC' in the 'START' input field

Select the 'START' input field using **TIMER** ⏲ . Using **SELECT** switch on 'VPS/PDC' ('*' lights up). If you press **SELECT** again, you will switch 'VPS/PDC' off ('*' goes out).

5. When all informations are correctly, confirm with **OK** . The programming information is stored in a TIMER block.

❻ Insert a cassette with an intact security tab (unprotected).

Using 'Tape List'

To save a recording in the 'Tape List' or to use a 'Tape List' cassette, enter the cassette number using the number buttons **0-9** on the remote control.
The cassette is being checked. You can find more information on the 'Tape List' in the chapter 'Tape List'. If you don't use the Tape List, interrupt with **STOP ■** .

❼ Switch off with **STANDBY/ON** ⏻ .
The programmed recording will only function when the video recorder is **switched off** with **STANDBY/ON** ⏻ .
If any of the TIMER blocks are in use, '⏲' will light up on the video recorder display.

Problem solving for programmed recordings

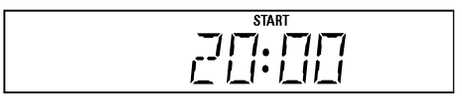
PROBLEM	SOLUTION
The video recorder does not react	✓While a programmed recording is being made, you cannot operate your video recorder manually. If you want to cancel the programmed recording, press **STANDBY/ON** ⏻ .
'SWITCH TO STANDBY- TIMER RECORDING' **flashes on the TV screen**	✓The video recorder was switched on several minutes before the start of a programmed recording. Switch off the video recorder with **STANDBY/ON** ⏻ . A programmed recording (timer) will only function if the video recorder is switched off.
A cassette was automatically ejected during recording	✓The end of the tape was reached during recording.
Error message: 'NO CASSETTE' '⏲' **will flash in the video recorder display**	✓No cassette was inserted. Insert a cassette and switch off the video recorder using **STANDBY/ON** ⏻ .
The 'PROTECTED CASSETTE' **error message appears briefly on the screen then the cassette is ejected**	✓A cassette was inserted with the security tab removed. Undo the erase protection (chapter 'Manual Recording', section 'Preventing accidental erasing of cassettes') or insert a different cassette.
Error message: 'ALL TIMERS OCCUPIED'	✓If this error message appears after pressing **TIMER** ⏲ , then all TIMER blocks are already programmed. No more recordings can be programmed. If you want to clear or check a programmed recording (TIMER block), select it with **↑+P** or **P−↓** .
The 'DATA ERROR' **message appears on the screen**	✓The data for the recording could not be transferred. Please check date, start time and end time of the programmed recording.

Programming a recording with 'TURBO TIMER'

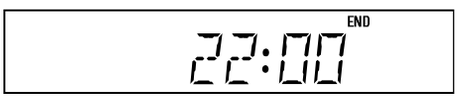
With this function, programming a recording that takes place within the next 24 hours, will be quick and easy. The following pre-set information will appear in the display when you programme a recording using 'TURBO TIMER'.
Programme number = the programme number currently selected (TV channel)
Start time = current time
End time = current time +2 hours

❶ Press **TURBO TIMER** on the remote control.
The current set programme number will appear in the display, for instance, 'PROG. 01'. If required, you can change this using **↑+P** or **P−↓** .

× 'CLK' will flash in the video recorder display
✓ This display means that the video recorder clock is not set correctly. Please read the section 'Setting the time and date' in chapter 'Installing your video recorder'



❷ Press **TURBO TIMER** .
The current time (= start time) will appear in the display, for instance, 'START 20:00'. If required, you can change this using **↑+P** or **P−↓** .



❸ Press **TURBO TIMER** .
The end time will appear in the display, for instance, 'END 22:00'. 'END 22:00'. If required, you can change this using **↑+P** or **P−↓** .

❹ Press **TURBO TIMER** .
'OK' will briefly appear in the video recorder display. Programming is now complete.

❺ Insert a cassette with an intact security tab (unprotected).

Using Tape List
Enter the cassette number with the number buttons **0-9** .
The cassette is being checked. You can find more information on the 'Tape List' in the chapter 'Tape List'.

❻ Switch off with **STANDBY/ON** ⏻ .
The programmed recording will only function when the video recorder is **switched off** with **STANDBY/ON** ⏻ .
If any of the TIMER blocks are in use, ' ⏲ ' will light up on the video recorder display.

Problems and solutions for programmed recordings

PROBLEM	SOLUTION
The video recorder does not react	✓While a programmed recording is being made, you cannot operate your video recorder manually. If you want to cancel the programmed recording, press **STANDBY/ON** ⏻ .
' ⏲ ' will flash in the video recorder display	✓The video recorder was switched on several minutes before the start of a programmed recording. Switch off the video recorder with **STANDBY/ON** ⏻ . A programmed recording (timer) will only function if the video recorder is switched off. ✓No cassette was inserted. Insert a cassette and switch off the video recorder using **STANDBY/ON** ⏻ .
Cassette is ejected during recording	✓The end of the tape was reached during recording.
The 'PROT' error message appears briefly in the display then the cassette is ejected	✓A cassette was inserted with the security tab removed. Undo the erase protection (chapter 'Manual Recording', section 'Preventing accidental erasing of cassettes') or insert a different cassette.
Error message: 'FULL'	✓If this error message appears after pressing **TIMER** ⏲ , then all TIMER blocks are already programmed. No more recordings can be programmed. If you want to clear or check a programmed recording (TIMER block), select it with **↑+P** or **P−↓** .

How to check, change or delete a programmed recording (TIMER)

1. Switch on the TV set. If required, select the programme number for the video recorder.

2. Press **TIMER** ⏲ on the remote control **twice** .

3. Select the programmed recording (TIMER) you want to check, change or delete with **P −↓** or **↑+ P** .

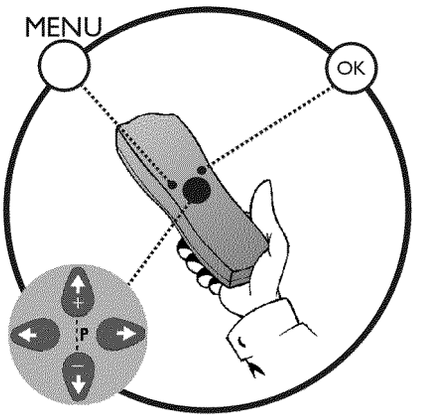
Delete programmed recording
Press **CLEAR (CL)** .
'--' appears rather than the displayed values
To end, press **MENU** .

4. Press **TIMER** ⏲ .
Select the input field with ← or → .
If required, change the information with **↑+ P** , **P −↓** or the number buttons **0-9** .

5. Confirm with **OK** .

6. Switch off with **STANDBY/ON** ⏻ .

10 Other functions

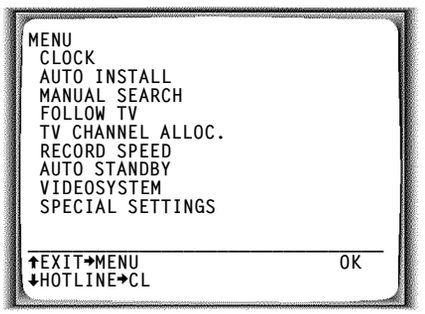


Changing the video (colour) system

If you play back recordings made on a different kind of tape, the automatic video (colour) system switch-over may lead to colour distortion.
You can manually switch off the video (colour) system for playback or switch off the colour.

Video (colour) systems

Other countries, other video (colour) systems:
In central Europe transmissions are broadcast in the PAL system (Phase Alternation Line) standard. France uses SECAM (Séquentiel à mémoire). In some countries (USA and Japan), TV viewers receive their programmes as an NTSC signal (National Television System Committee).

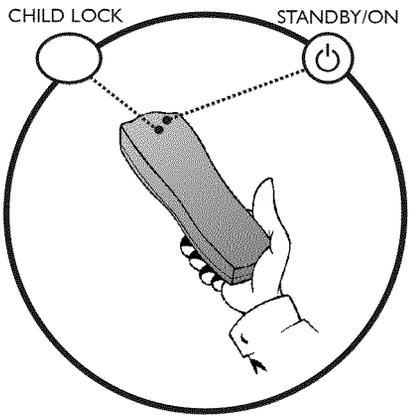


1. **During playback** , press the **MENU** button on the remote control. The main menu will appear.
2. Select line 'VIDEOSYSTEM' using **P −↓** or **↑+ P** and confirm with **OK** .
3. Select the TV (colour) system with the least disruptions using → or ← .
   If colour interference still occurs, you can switch to 'B/W' (black and white).
4. Confirm with **OK** .
5. To end, press **MENU** .

How can I change back to 'Automatic Switch-over'?

If you change the programme number, the video (colour) system for recording will switch itself back to 'AUTO' (automatic switch-over).

If you eject the cassette, the video (colour) system for playback will switch itself back to 'AUTO' (automatic switch-over).

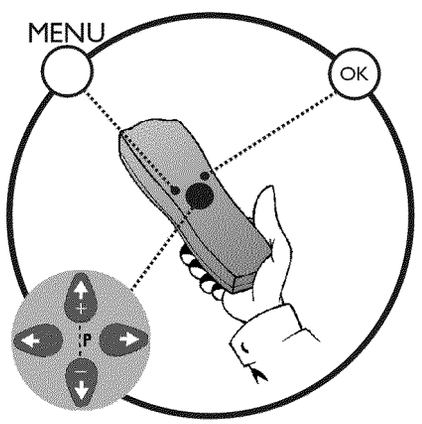


Child lock

You can prevent unauthorised use of your video recorder with this function. When the child lock is active, the buttons on the front of the device are blocked (will not function). You can make programmed recordings while the child lock is on.

1. With the video recorder switched on, press **CHILD LOCK** on the remote control for **five seconds**. ' ' will appear on the video recorder display.
2. Put away the remote control somewhere out of reach of children.
3. If you want to switch off the child lock, press **CHILD LOCK** again for **five seconds**, with the video recorder switched on. ' ' will disappear from the video recorder display.

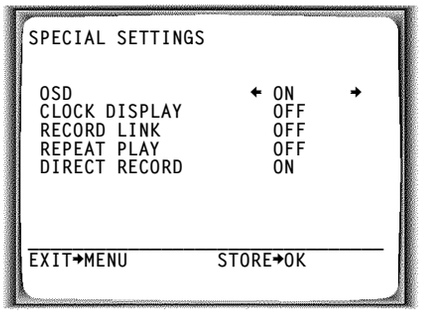
× ' ' will flash in the video recorder display
✓ This symbol flashes when a button is pressed when the child lock is active.



Switching the on-screen display (OSD) off or on

Along with the on screen menu, the OSD (On Screen Display) also displays information on the current operating status (counter, playback, recording, TV channel, etc.) on the TV screen. You can switch off the information about the operating status so that the on screen display (OSD) is not recorded when copying video cassettes.

1. Switch on the TV set. If required, select the programme number for the video recorder.
2. Press **MENU** on the remote control. The main menu will appear.
3. Select line 'SPECIAL SETTINGS' using **P −↓** or **↑+ P** and confirm with **OK** .



4 In the line 'OSD', select the desired setting with → .

Which settings can I choose?
'ON': Shows the OSD for a few seconds only.
'OFF': Switches off the OSD.

5 Confirm with **OK** .

6 To end, press **MENU** .

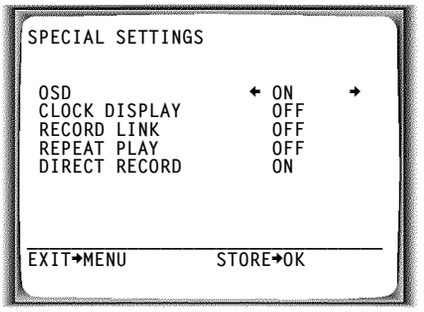
Switch off the clock display

To save energy, you can switch off the clock display on the video recorder. Programmed (TIMER) recordings will still take place.

1 Switch on the TV set. If required, select the programme number for the video recorder.

2 Press **MENU** on the remote control. The main menu will appear.

3 Select the line 'SPECIAL SETTINGS' with **P −↓** or **↑+ P** and confirm with **OK** .



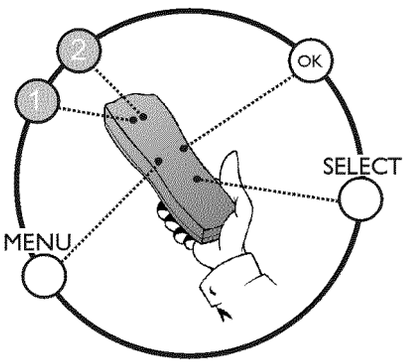
4 To switch off the time display on the video recorder, select in the line 'CLOCK DISPLAY' with → 'OFF'.

How can I switch on the clock display?
Select with ← 'ON' (time display switched on).

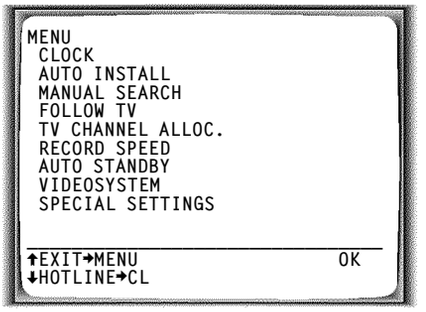
5 Confirm with **OK** .
'STORED' will briefly appear on the TV screen.

6 To end, press **MENU** .

Switching the remote control command



If you use a second video recorder that reacts to the same remote control command (stop, play, record, etc.) as this video recorder, then you can change the remote control and this video recorder.



❶ Switch on the TV set. If required, select the programme number for the video recorder.

❷ Press **MENU** on the remote control. The main menu will appear.

❸ Press the **SELECT** button on the remote control. In addition, press the number button **2** to change the remote control to 'VCR2'.

❹ Confirm with **OK** .
The main menu will disappear. If you have switched the remote control and the video recorder to 'VCR2', 'RESPONDS TO VCR2' will appear on the TV screen.

What do I need to pay attention to when changing the remote control and video recorder?

You must always change both video recorder and remote control to the same setting, e.g. video recorder **and** remote control to 'VCR1' or 'VCR2'.

After you change the batteries in the remote control, it will switch back to 'VCR1'.

How can I change back to 'VCR1'?

- Press **MENU** . The main menu will appear.
- Press the **SELECT** button on the remote control. Then press the number button **1** to change the remote control to 'VCR1'.
- Confirm with **OK** on the remote control. The main menu will disappear. This picture will appear on the screen: 'RESPONDS TO VCR1'

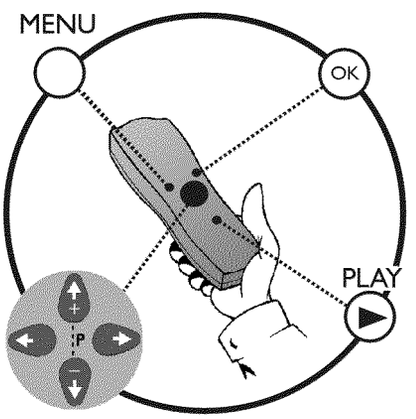
× **The main menu will not disappear and no message appears**

✓ The remote control command was not recognised by the video recorder. Repeat step ❸ .

× **This will, for example, appear in the display: 'VCR2'**

✓ Remote control and video recorder were not both changed. If you press a button for a long time, the video recorder settings appear in the display. In this case 'VCR2'. You need to also change the remote to 'VCR2' (button **SELECT** and **2**).

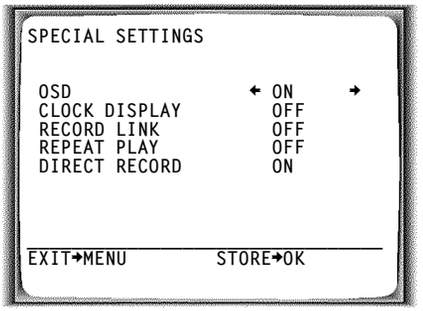
Using your video recorder remote control with your TV set - see page 61



Continuous playback

This function can be used to play a cassette over and over again. When the end of the cassette is reached, the video recorder will rewind and start from the beginning again. This function is activated or deactivated as follows.

1. Press **MENU** on the remote control. The main menu will appear.

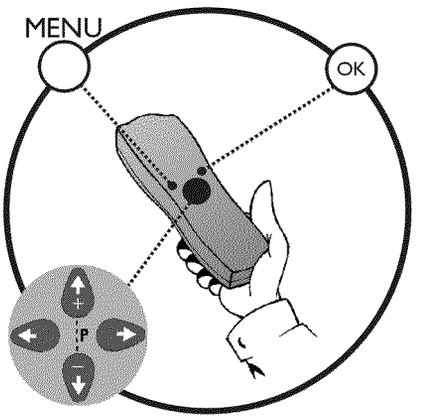


2. Select line 'SPECIAL SETTINGS' using **↑+P** or **P−↓** and confirm with **OK**.
3. Select line 'REPEAT PLAY' using **↑+P** or **P−↓**.
4. Select function 'ON' with ← or → .
   If you select 'OFF', continuous playback will be switched off.
5. Confirm with **OK**.
   'STORED' will appear briefly on the screen.
6. To end, press **MENU**.
7. Insert a cassette.

Using 'Tape List'

Enter the 'Tape List' cassette number with the number buttons **0-9** on the remote control.
The cassette is being checked. You can find more information on the 'Tape List' in the chapter 'Tape List'. If you don't use the Tape List, interrupt with **STOP ■** or **PLAY ►** .

8. Start the continuous playback with the **PLAY ►** playback button.



Automatic switch-off

If you haven't used the video recorder for a few minutes in certain modes (e.g.: STOP), it will switch to standby automatically. You can cancel this function to use the video recorder as a television receiver.

1. Switch on the TV set. If required, select the programme number for the video recorder.
2. Press **MENU** on the remote control. The main menu will appear.
3. Select line 'AUTO STANDBY' using **P −** ↓ or ↑ **+ P** .
4. Select 'OFF' (no automatic switch-off) or 'ON' (automatic switch-off) with the menu buttons → or ← .
5. Confirm with **OK** . 'STORED' will briefly appear on the TV screen.
6. To end, press **MENU** .
7. Hold down the **TV** 🔇 button.
8. By using the **TV** buttons on the panel in the middle of the control, you can::

+ ◿	increase the TV volume
◿ **−**	decrease the TV volume
TV 🔇	switch off sound
TV ⏻	switch off the TV set
+ TV	next programme number
TV −	previous programme number

Selecting the sound channel

You can select the desired sound channel during playback or while receiving TV channels via the video recorder. This allows you to select a desired language for multi-language transmissions.

1. Press **SELECT** . This will show the current sound setting.

What goes on behind the settings?

'STEREO':
Left and right stereo (HIFI) sound tracks can be heard.
'LEFT':
The left stereo (HIFI) sound track can be heard.
'RIGHT':
The right stereo (HIFI) sound track can be heard.
'MONO':
The mono (linear) sound track can be heard.
'MIXED':
The mono (linear) sound track can be heard at the same time as the stereo (HIFI) sound tracks.

2. Keep pressing **SELECT** until the desired setting appears in the display.

Automatic switch to 'MONO'

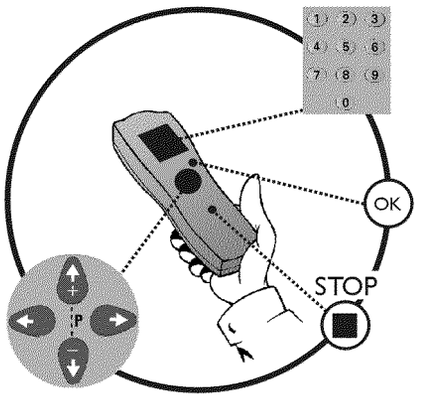
If a TV channel does not transmit a stereo signal or if there is no stereo signal recorded on the video cassette, the video recorder will automatically switch to 'MONO'. You will not be able to select any other settings.

Playing back an audio dubbing

When dubbing video recordings, the mono (linear) sound track is recorded with a new sound signal. The stereo (HIFI) sound track is kept. To hear the dubbed section, you must select either 'MONO' or 'MIXED'.

11 Suppressing interference

ENGLISH



Optimising the modulator

In some reception locations it is possible that a TV channel will be sent on the same or similar frequency as the video recorder.
Result: As soon as the video recorder is switched on, the reception quality for this or several other TV channels will decreased.
The following steps will show you how to change the pre-set 'transmission' (modulator) frequency on the video recorder.

What is a modulator?

This electronic component in the video recorder allows the device to transmit audio and video signals via the aerial cable. These signals can be received TV set just like TV channels.

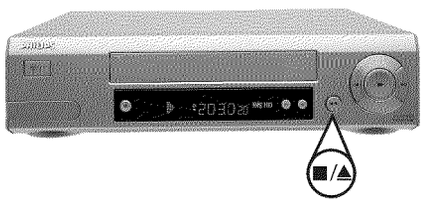
What is an modulator frequency?

This frequency or channel indicates the frequency or channel on which the audio or video signal is transmitted.

1. Switch on the TV set. Select the programme number used for video recorder playback (see TV operating instructions).

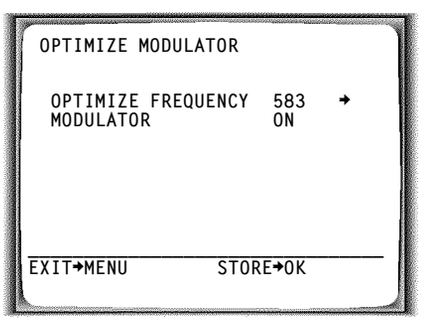
2. Press **STOP/EJECT ■/▲** to eject any cassette that might be in the device.

3. Hold the **STOP ■** button on the remote control.



4. **In addition** press the **STOP/EJECT ■/▲** button on the video recorder until the modulator frequency appears on the screen, e.g. '*M583*' (583MHz or UHF channel 35).

The video recorder will now transmit a test image on UHF channel 35/Frequency 583MHz.



5. Select line 'OPTIMIZE FREQUENCY' using **↑+P** or **P−↓** . Enter the new modulator frequency with the number buttons **0-9** .

Can the modulator frequency be changed automatically?

Pressing **→** starts the automatic channel search. When the video recorder finds a 'free' channel (not used be a TV channel), the frequency of this channel will be shown in the display.

6. Tune in the TV set to the new modulator frequency (channel 21 - 69) shown in the video recorder display.

7 Confirm with **OK** .
'STORED' will appear briefly on the screen.

Optimising the modulator is now complete.

Switching the modulator on / off

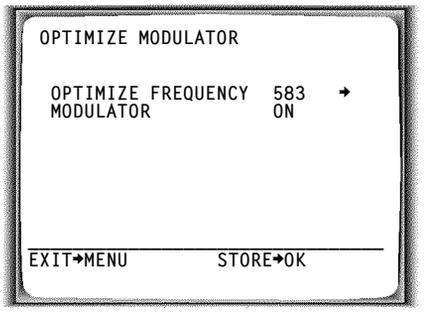
If you cannot clear picture or sound interference despite optimisation, you can switch off the built-in modulator.
Warning:
this is only possible if you have connected the video recorder to the TV set with a scart cable. Without a scart cable you will not receive a picture from the video recorder on the TV set when the modulator is switched off.

1 Switch on the TV set. If required, select the programme number for the video recorder.

2 Press **STOP/EJECT ■/⏏** to eject any cassette that might be in the device.

3 Hold the **STOP ■** button on the remote control.

4 **In addition** press the **STOP/EJECT ■/⏏** button on the video recorder until the modulator frequency appears on the screen, e.g. 'M583' (583MHz or UHF channel 35).



5 Select the line 'MODULATOR' on the TV screen or 'M01+' in the display with **↑+P** or **P−↓** .

6 Select 'OFF' on the TV screen with ← or in the display 'M01-' (modulator off).

How can I switch the modulator back on?
In the display, select 'M01+' (modulator on) with ← .

7 Confirm with **OK** .

8 To end, press **MENU** .

12 Before you call an engineer

If, contrary to expectation, you have any problems using this video recorder, it may be caused by the following reasons.
You will find the phone number in the enclosed guarantee leaflet.
The telephone numbers can be found on the back of this instruction manual. Have the model number (MODEL NO) and the production number (PROD.NO.) of your video recorder ready.

HOTLINE telephone numbers

The telephone numbers for after-sales service (HOTLINE) are also saved in your video recorder. To call them up, proceed as follows:

1. Switch on the TV set. If required, select the programme number for the video recorder.
2. Press **MENU** . The main menu appears.
3. Press **CLEAR (CL)** . The after-sales service telephone numbers will appear on the screen.
4. Using **OK** , you can select more telephone numbers.
5. To end, press **MENU** .

PROBLEM	SOLUTION
Your video recorder does not respond to any button being pressed:	✓There is no power supply: check the power supply. ✓A programmed recording is currently being made: if desired, cancel the programmed recording with **STANDBY/ON** ⏻ . ✓Child lock active: switch the child lock off. ✓There is a technical problem: disconnect from the mains power supply for 30 seconds, then connect again. If this doesn't help, you could reset your video recorder to the default factory settings.
Resetting devices to default factory settings	✓**Attention:** All the information stored (TV channels, time and date, TIMER) will be cleared. 1. Disconnect from the mains power supply. 2. Press and hold the **STANDBY/ON** ⏻**/I** button on the device and reconnect to the mains power supply. 3. Release the button when 'OSD' appears in the video recorder display.
Cassette is jammed in the video recorder:	✓Don't use force. Pull out the mains plug for a moment.
Remote control does not work:	✓Remote control not pointed toward the video recorder: point it at the video recorder. ✓There is a technical problem: Take out the batteries, wait for 10 seconds and place them back. ✓Batteries have run out: change the batteries. ✓You have given the wrong remote control command: read 'Switching remote control command' in chapter 'Additional functions'.

PROBLEM	SOLUTION
No picture when you play a cassette:	✓There is no recording on the cassette: change the cassette. ✓You have selected the wrong programme number on the TV for playing cassette: on the TV, select the correct programme number for the video recorder. ✓The cable connecting the TV set and the video recorder has come loose: check the cable.
Poor picture quality when you play a cassette:	✓Your TV set is not properly adjusted. ✓The cassette is badly worn or of poor quality: use new cassette. ✓Tracking is not properly adjusted: turn to chapter 'Eliminating picture interference' and read the section 'Optimising tracking'. ✓Please read chapter 'Eliminating picture interference'.
No recording possible:	✓The TV channel you want to record is not stored or you selected the wrong programme number: check TV channels stored. ✓A cassette was inserted that does not have the security tab (cannot be used to record): Insert a cassette with an intact security tab or change cassette. For more information, please see the section 'Preventing accidental erasing of cassettes' in chapter 'Manual Recording'. ✓'VPS/PDC' switched on but 'VPS/PDCtime' wrong: 'enter 'VPS/PDCtime exactly to the minute. Have your aerial checked.
Programmed recording does not work:	✓You have programmed the wrong time or date: check time and date. ✓Check time and date. If time and date are wrong despite manual setting, you can switch 'SMART CLOCK' off. Please read the section 'Setting the time and date' in the chapter 'Installing your video recorder'. ✓You have not set the TIMER properly: Check the programmed recordings (TIMER block). ✓You have put in a cassette that cannot be recorded on: undo the erase protection on the cassette.
The wrong TV channel was decoded (entered) after you programmed a recording using Video Plus+	✓1. Enter the PlusCode programming number of the desired TV channel. 2. Confirm with **OK** . 3. Check the programme number/channel name in the 'PROG.' input field 4. If this does not correspond to the desired TV channel, select the input field and change the programme number/channel name. 5. Confirm with **TIMER** ⏲ .
There is picture or sound interference on TV reception:	✓Turn to chapter 'Suppressing interference' and read 'Optimising the modulator' and 'Switching on/off the modulator'. ✓Have your aerial checked.

Code numbers of the remote control

Acura 02
Adyson 05, 20
Akai 33,18
Akura 21, 25
Alba 02, 21, 07
Allorgan 28
Amplivision 20
Amstrad 02
Anitech 02
Arcam 20
Asuka 21
Audiosonic 15

BPL 26
BSR 28
BTC 21
Basic Line 02, 21
Baur 33,03
Beko 35
Binatone 20
Blaupunkt 17
Blue Sky 21
Blue Star 26
Bondstec 23
Boots 20
Brandt 15
Bush 21, 02, 07, 26, 28, 36, 42

CGE 23
CTC 23
Carrefour 07
Cascade 02
Cimline 02
Clatronic 23, 35
Condor 30, 35
Contec 02, 07
Crown 35, 02, 38
Cybertron 21

Daewoo 36, 02
Dainichi 21
Dayton 02
De Graaf 18
Decca 10
Dixi 02
Dual 42

Elite 21, 30
Elta 02
Emerson 33

Ferguson 15
Fidelity 33
Finlandia 32, 18
Finlux 32, 13, 10
Firstline 31, 02, 20, 23, 28
Fisher 20, 18, 35
Flint 40
Formenti 30
Frontech 23, 25
Fujitsu 10
Funai 28, 25

GEC 10, 20
GPM 21
Geloso 02
Genexxa 21
GoldStar 20, 15, 27
Goodmans 10, 07, 20, 29, 36
Gorenje 35
Graetz 33
Granada 10, 18, 20
Grandin 26
Grundig 17

HCM 02, 26
Hanseatic 33, 30, 01
Hinari 02, 07, 21
Hisawa 26, 40
Hitachi 22, 15, 08, 05, 20, 07, 13
Huanyu 36
Hypson 25, 26

ICE 20, 25
ICeS 21
ITT 33
Imperial 23, 38, 35
Inno Hit 10
Interfunk 33, 23
Intervision 12, 20, 25
Isukai 21

JVC 09, 07

Kaisui 21, 20, 02, 26
Kathrein 01
Koyoda 02

Leyco 10, 25, 28
Lloytron 05
Luxor 33

M Electronic . 32,13,20,02,15,36,41
Magnadyne 12, 23
Magnafon 12
Manesth 30, 20, 25
Marantz 01
Matsui .. 02,39,18,20,04,06,07,10,28
Memorex 02
Metz 34
Mitsubishi 07, 14, 16
Mivar 27
Multitech 02, 12

Neckermann 01
Nikkai 06, 21, 05, 10, 25
Nobliko 12
Nokia 41, 33
Nordmende 15

Oceanic 33
Orion 28, 30, 31, 39
Osaki 05, 10, 20, 21, 25
Oso 21
Osume 05, 10
Otake 29
Otto Versand 03, 07, 20, 30, 01

Palladium 35, 38
Panama 20, 25
Panasonic 24, 34
Pathe Cinema 30
Pausa 02
Perdio 30
Phase 05
Philco 23
Philips 01, 36
Pioneer 15
Profex 02, 33
Proline 31
Protech 12, 02, 20, 23, 25, 38

Quelle 03, 04, 33
Questa 07

Rank Arena 07
Rediffusion 33
Rex 25
Roadstar 02, 25, 21, 38

SEG 20, 07, 25
SEI 12, 03, 28
Saba 15
Saisho 04, 02, 25
Salora 33
Sambers 12
Samsung 20, 25, 27, 35, 02, 01
Sanyo 07, 18, 04, 10
Schaub Lorenz 33
Schneider 21, 23
Sentra 06
Sharp 11, 07
Shorai 28
Siarem 12
Siemens 17
Silver 07
Sinudyne 12, 03, 28
Solavox 05
Sonitron 18
Sonoko 02
Sonolor 18
Sony 04, 03, 07
Soundwave 38
Standard 20, 21, 02
Sunkai 28, 31
Susumu 21

Tandy 21, 10, 20
Tashiko 07, 20
Tatung 10, 20
Tec 20, 23
Technema 30
Technics 24
Telefunken 15
Telemeister 30
Teletech 07, 20
Teleton 20
Tensai 21, 28, 29, 30
Texet 21
Thomson 15
Thorn 06, 10, 33
Tomashi 26
Toshiba 06, 07

Uher 30
Ultravox 12
Universum 13, 32, 25, 35

Videosat 23
Videotechnic 20
Vision 30

Waltham 20
Watson 30
Watt Radio 12
Wega 07
White Westinghouse 30

Yoko 20, 25

ADDENDUM SHEET

Your video recorder is equipped with the following feature:

Using your video recorder remote control with your TV set

Your video recorder remote control can transmit several commands to TV sets of different makes.
By using the **TV** buttons on the panel in the middle of the control, you can:

- [⊿+] increase the TV volume
- [⊿−] reduce the TV volume
- [TV 🔇] switch off sound
- [TV ⏻] switch off the TV set
- [TV +] next programme number
- [TV −] previous programme number

1. Hold [TV 🔇] and enter the correct remote control command with the number buttons [0-9].
   When you have entered the code number correctly, the TV set will switch off.
   You will find a list of all available remote control commands on page 60 of this manual.

   If the selected code does not work with your TV set, or if the make of your TV is not in the list, you can try out the codes one after the other.

3103 116 06551
1443/000

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